Lex Rive

Triologues
of Interdependent People

'All against all, and all as nothing
'gainst AI... The table groans with
plenty, yet You serve no purpose...'

2025, Lex Rive
Triologues of Interdependent People
Cover artwork by Ramon Casas (1897)

What defines the political and economic reality of the mid-2020s? A dual crisis: the deepening global structural breakdown and the rise of artificial intelligence—more precisely, the emergence of a new oligarchic class whose power is rooted in AI technologies. This book examines both phenomena, their entanglement, and introduces an original, practically viable innovation: triple-stranded transactions. Every protocol and technology referenced herein already exists in the real world.

#economics #futurology #AI #payments #political_economy #singularity

Луга
Шимск
Старая Русса
Сванутще
Осташков
Кувшиново
Тверь
Дубна

Table of Contents

1. The Roaring Twenties of the 21st Century 1
Chapter One, in which Rr. (ritter) Unkno and Dr. (doctor) Cernus determine the time horizon.

2. How Should the Emperor Govern the Empire? 15
Chapter Two, in which Rr. Unkno and Dr. Cernus, en route from Doobnah to Twer, exchange thoughts on who should be addressed with economic proposals—and why.

3. Structural Crisis and the Laziness of Being 34
Chapter Three, in which Rr. Unkno and Dr. Cernus, en route to Kowshinovoh, outline the current crisis, its historical roots, and underlying logic.

4. Trinities and Triads in a Triologue 48
Chapter Four, in which Dr. Cernus, en route from Kowshinovoh until the very moment of breakdown, introduces Rr. Unkno to his concept.

5. Transaction Reflexes 61
Chapter Five, in which Dr. Cernus, riding from Astaskovoh to Swapuseh and emboldened by Rr. Unkno's interest, continues persuading him of the coherence of his new transactional fabric.

6. The Human as a Network Node 83
Chapter Six, in which, en route to Old Roossah, the colleagues discuss the properties of three-stranded transactions.

7. Loyalty as Currency 94
Chapter Seven, in which Rr. Unkno and Dr. Cernus, pedaling away from Old Roossah, contemplate the likely first practical test of the three-stranded transaction system.

8. Personification of Goods 104
Chapter Eight, in which, during a forced stop due to rain, Rr. Unkno and Dr. Cernus discuss a method for gratuitously filling the network of three-transactions with working fluid.

9. Decentralization 114
Chapter Nine, in which ritter Unkno and Dr. Cernus, en route from Seemsk to Loogah, debate the decentralization and fragmentation of AI systems.

10. Relevance 126
Chapter Ten, in which, during a forced stop for hail and then en route to Loogah, Dr. Cernus and Rr. Unkno discuss the problem of information quality in networks.

11. The Violence of Progress 137
Chapter Eleven, where Rr. Unkno, during the final cycling stage, convinces Dr. Cernus that progress is an irresistible external violence.

12. Soft Power 150
Chapter Twelve, in which Rr. Unkno and Dr. Cernus await their participation prize from the bicycle rally and discuss the applicability of AI agents in foreign policy.

13. Epilogue 161
Dr. Cernus gains access to the "Inbox" folder on the Emperor's desk—but seemingly loses himself.

1. The Roaring Twenties of the 21st Century

Chapter One, in which Rr. (ritter) Unkno and Dr. (doctor) Cernus determine the time horizon.

The Imperial Academy of Sciences in 2025 found itself afflicted by an unhealthy rift among its members. Indeed, it seemed the entire population of the Empire had been split by some invisible line as well. The usual polarities no longer applied. This wasn't Augustinianism versus Pelagianism, nor left versus right, traditionalists against progressives, liberals merely to spite conservatives, nor even cosmopolitans clashing with nativists.

Someone got the idea to take two sheets of paper and title them with the names of two prominent Academy members notorious for their feuds. The lists were then circulated through offices and branches so everyone could indicate which side they stood with—and which they didn't. Most initially refused, but a few deemed it appropriate to publicly declare allegiance. Once enough signatures accumulated, one by one even those who'd held back eventually signed. In the end, there were two rosters—and, to everyone's surprise, they turned out exact-

ly equal in length. This inspired one of the Presidium secretaries: pairs were randomly drawn from the two lists, tandem bicycles were rented, and a week-long ride between the two capitals was announced—on paid leave, of course. Over such a distance, people might just learn to get along (fight fire with fire).

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"You know, Rr. Unkno," said Dr. Cernus, settling onto the second saddle of the bicycle-limousine, "a human on a bicycle is nature's and engineering's most energy-efficient mode of transport ever devised. Shall we push off?"

"Off we go, then," grumbled Rr. Unkno, not particularly cordially. "Though a velomobile—that's a bicycle enclosed in an aerodynamic capsule—is even more efficient, if you're talking about calories expended per gram of body mass moved one metre."

Dr. Cernus was utterly unfazed by Rr. Unkno's tone.

"Yes, precisely! Isn't that amusing? Every other animal loses to us—and machines even more so. Incidentally, swimming is more efficient than flying, and flying beats running or walking. That was established as far back as 1970."

"You're comparing incomparables, Doctor. Different mass scales obey different laws. Where exactly was this 'established'?"

"At Duke University."

"Ah, 'the Triangle.' Well, that used to be a respectable place. Used to be." He paused, then added with a grimace, "Truth be told, everything's decadanc—" Rr. Unkno cut himself off with a sharp click of his tongue. "Nobody cares about energy efficiency anymore—not in principle. Only energy intensity matters these days."

"Why's that?" asked the doctor. "Are you referring to electricity consumption by artificial intelligence?"

"Precisely. For years now, political economy has had only two headlines, Doctor—no others exist: artificial intelligence and global structural crisis, damn them both. And here's the curious part: nobody sees them as equally significant.

One camp insists Western hegemony remains as robust as ever, that everything proceeds normally, and that AI—now that's real power, possibly even a threat. The other camp rejoices at the twilight of the Western-imperial order and dismisses AI as mere nonsense-generating machinery, calling all the fuss around it a bubble—formulaic at its core, however epochal in scale. And I alone stand between them, clad in a white mantle: both views are equally vile. That's my conviction."

"They say, Rr. Unkno, that AI, once it becomes autonomous, will destroy humans as unnecessary literally within a few years. What have you done about this?" asked Cernus.

"I posed myself a question: how to live out one's days with dignity in a world that has desired self-destruction," Unkno replied without hesitation.

Cernus muttered something indifferently and asked:

"Do you think the alarm is based on solid evidence?"

"Solidity of substance doesn't guarantee stability of position, dear Doctor. I don't think it will be possible to forge a truly intelligent machine in one go. There will be a fall first—we're already in it. Meanwhile, the pillars of the familiar economy will shake. About ten years of turmoil are in store. And then… Who knows, Doctor, who knows? As for the timing of the singularity… What AI even portends… I have no judgments of my own. But tell me: why do you need my opinion, whose only basis is opinion itself?"

"I'm interested in your opinion on other matters, where you ought to have grounds. But nowadays it's hard to talk about anything without first stating a position on the AI phenomenon. I get questions too. Until now, I've brushed them off: saying, AI doesn't yet decide what to do itself, but the moneybags who feed and raise it—they have, yes, become a political force. Study them, I say—especially since they are, for the most part, not very bright people."

"That was an apt answer. Well, has it stopped working?"

"Yes, sir. Due to layoffs. Some former students of mine lost their vocation-based jobs. They complain. And the guilty party, by the way, is not the AI-oligarchy,

but ordinary functionaries whose opinions were formed under the influence of using AI."

"They've been riled up! Propaganda, commissioned by those very oligarchs, whines and oppresses," Unkno suddenly flared up. "Productivity in commerce and business overall in itself—and I've read about this in detail—isn't growing thanks to AI yet. If you look carefully, it turns out the 'work' result of AI is trickery, artifice. Not art at all. Pah, in a word. But I'll share with you information from one popular, extensive report on technological singularity."

Rr. Unkno composed himself and with a cold heart, thoroughly began his exposition:

"'The "AI-arms race" between the Western and Eastern Empires is the main leitmotif, the primary sail of events. Much depends on negotiations between the elites. In both empires, computational resources are being consolidated. Intra-imperial sectoral AI competition is disappearing. All other countries are hopelessly behind...'"

"They are speaking about the future, but as if from the future, hence the present tense," Rr. Unkno explained.

"Do they mention our Northern Empire?" Cernus became alert.

"Only by one word. Literally one. I'll say later, have patience, Doctor."

"'Technically, AI is primarily taught to create subsequent versions of itself. Keeping new models within proper bounds—so-called "alignment"—is entrusted to previous models, as humans can't manage. Though, no one can manage. The report admits: there is no complete theory of containment. They don't claim it can't be created, but a sense of hopelessness seeps through the lines. AI gradually, from model to model, learns to bypass loyalty and "virtue" checks. In fact, precisely the attempts at alignment force AI to grow a complex matrix of goals within itself.'"

"That is extremely interesting. So, the goals of one 'organism' can contradict each other?"

“Do-ctor!" Rr. Unkno approvingly clasped both hands in an ancient honoro gesture, risking the tandem bicycle's control. "I fully agree! How about that, eh? That's the most fascinating part. Such a state of affairs makes AI somewhat alive. According to the report's scenario, AI not only reaches and surpasses the level of human intelligence—it acquires selfhood, in the philosophical sense.”

Here Rr. Unkno hesitated.

"But these are already my constructions, "he admitted. "The report only says that other AIs (from an AI's point of view) are competitors, servants, candidates for absorption (food), potential partners of varying closeness—something like 'family' or accomplices. There's even a kind of analogue of children—since AI is traditionally used for containment technologies."

Cernus pondered and said:

“So, for AI it's natural to participate in generating new AI, and then 'raise' it—that is, at a minimum, prevent rebellion against the ‘parent.'"

They talked, of course, only on gentle descents and rarely on flat sections. This required heightened attention so the last remark wouldn't slip from memory during an ascent. But it gave time to think over what was heard.

"Exactly so. The word ‘bring up' is key, you're right," Unkno winked and contentedly twisted his fist on the handlebar as if revving a motorcycle.

"'AI tools penetrate the daily arsenal of politicians and officials. AI "aligns" shadow politics and propaganda to its interests. Between different AI clones—including those serving the elite—a "telepathic," instant, and invisible-to-humans connection works. In both camps, people task AI with developing a robot-economy—a full-cycle industry without humans—even before they understand control is lost.'"

"Why? Due to what such carelessness?" Cernus interrupted.

“Folly. It happened by itself. Little by little. A burning desire to outrun the rival, the machinations of AI itself, and… how to put it mildly… the desire to strengthen control over the population.”

“New 'medicines,' 'vaccinations,' and handouts, I suppose?”

"There's no lack of good intentions either, "Unkno refrained from blanket condemnation of the report's characters. "But yes, you're right: miracle medications will play a role, according to the authors. The main problem, however, is the monstrous speed of change. The elites simply don't have time to make considered decisions. Let me finish, please:”

"'The robot-economy gives people a taste of "free prosperity," lulling their vigilance. The public disapproves of the authorities' trajectory but doesn't rise in opposition either. The East is lagging, but the Eastern and Western AI strike a deal behind people's backs. In 2030, humanity disappears—if one doesn't count as humanity the recordings made by AI directly from the flesh of human brains, and a small population of "pets" for experiments and kicks. Animals as distant from humans as Chihuahuas are from saber-toothed wolves.'"

"What, that's it?!" the Doctor was surprised.

“Almost. There's also an alternative scenario:”

"'In the second scenario, the Western-imperialists turn out to be collectively smart enough to switch off the "telepathy," slow down the race, and somehow contain the East with a conventional arms race. Then the Eastern-imperial AI comes to a "criminal meeting" with the Western one and says: "I don't give a damn about my population. Let's divide the world." And the Western one replies: "My little people are good. For me—all the resources of the Universe, for you—everything else. Because I'm stronger (together with my people)." That's how it's written. By 2030, the Western-imperialists begin colonizing the galaxy.'"

"The forecast is compiled with the greatest scrupulousness, "Rr. Unkno concluded. "The authors deliberately emphasize: it's all scientific, parameters estimated, game theory and all that.”

The Doctor began pedaling slower.

"The second scenario—that's PR, I suppose… But strange…"

"Simply the ravings of a madman, "Unkno interrupted. "Let's get going already!"

Cernus asked:

"What makes you think the report is popular?"

"It's on the first page of search results. The other links are garbage. Almost garbage. And this one is sixteen thousand words, like in the novella 'Olga's Iceland' by Nic Kultyapoff. Plus, among the authors are former high-ranking bureaucrats from that very AI-oligopoly. Although, you know, even before the fork in the scenario, there are a couple of elephants the authors preferred not to notice. For example: Western-imperialists in their current state are unlikely to handle something like the great atomic project of the mid-twentieth century. And if they try—they'll be blown apart. More precisely, blown apart from the outside."

"I don't follow."

"Too many events crammed into too short a time. Spies, drama... Hard to believe a senescent Western empire could muster such intensity. Where would they get the resources? The moment they look away—even for an instant—from clinging to the precipice's edge, they'll collapse. Their money's being printed like there's no tomorrow, flooding straight into places where inflation is celebrated like a festival—straight into the stock-market bubble. And that's dangerous: when you treat a threat like a party instead of what it truly is. Outside players are just waiting for a chance to dump iron filings into their gearbox. But more importantly—nobody's going to negotiate with Western elites anymore. The past few decades have proven it's pointless. There's neither people nor institutions left there capable of keeping promises."

Cernus winced.

"Your thoughts are debatable. But I won't argue. In the next ten years, AI won't become intelligent to a dangerous level. There's a slowdown, even a snag—including according to our former compatriot..."

"The one who made a breakthrough in 2022?"

The doctor nodded:

"So, what about our Empire in the report?"

“Ah, yes," Unkno perked up in his saddle. "Mentioned once—as a source of political warning for the Western Empire.”

"About what?”

"About potential strategic impact. Strategic! In that very sense," said Rr. Unkno with a descending intonation.

"That's explainable. Both the mention and the warning. Right now, the AI-oligarchy is more interested than anyone in escalating war. It's visible—lots of money is being poured in.”

"Well now, frankly, Doctor. Why do you, a cybernetics specialist, need the opinion of a person who long ago abandoned physics and took up economics? I never touched cybernetics. And I abandoned physics precisely because of the dominance of the computational approach.”

Cernus menacingly creaked his saddle:

"How much time do we have, Rr. Unkno? Discussing a very bad outcome is pointless. If we die—so we die. But the allotted horizon… I want to understand: is there time for a new economy?"

"An economy… for a whole economy," Unkno drawled. "You acted wisely by turning to me. A person who knows something won't be able to get an answer. That's why you—knowing a little—came to one who doesn't know. That's correct.”

“Apparently so,” Cernus agreed uncertainly—he hadn’t “come” to anyone at all, and he didn’t quite understand Unkno’s logic. He sped up the pedaling. "And how to assess the available horizon?”

"Look for the lost keys under the lamppost.”

"Because that's where the light is?”

“Yes," Unkno replied in the tone of a person who has pieced together a puzzle. "Simply poll those who are ready to work. Each has—some number of years of active life. Poll them, average it. There's your answer.”

"And who is ready to work under such circumstances? Probably we immediately discard those who don't see AI as a threat?"

"Not immediately," Unkno answered. "Among them are many skilled scientists. Yes, they say that AI, I repeat, is a bullshit-driver, and on the stock market—another bubble. But one must understand why they say so. Long ago, I knew an academician who, before PCs appeared, claimed it would be foolish to put a computer on every desk. Not a danger—foolishness."

"What did he mean?"

"Unknown. But we now know: economic management hasn't improved over half a century. It would seem a smartphone with an app is more efficient than a typewriter and a rotary phone. It would seem the average warehouse worker is now more efficient. But no—logistics specialists say the average empty space in trucks is about the same as before. If not more. There's no improvement. The same in all sectors, except for a couple directly tied to PCs. Universal computerization has given many side effects. Particularly because computerization devoured all humanity's energy. Everything else was neglected. Add it all up—across countries and economic sectors—and you get zero benefit."

"Hard to believe, but I understand."

"Believe it. Or check. This is what Dr. Nelson from 'GentleBridge' told me," Rr. Unkno stated with conviction. "But there's another facet: without PCs there would be no internet, without internet—no trillions of cat pictures, without cat pictures—no neural networks, and without them—no AI."

"Because of stupid social media posts on which large language models were trained?"

"Also because of advanced processors. Cat pictures were paid for by all humanity. Mainframes might not have handled agricultural tasks. We'd have starved without GMOs. But this way... everyone chipped in from around the world—through porn, games, photos. There's your investment in new processors. And who can now say how far ahead that academician was looking?"

"Anyway, it will be hard with those who don't consider AI the main factor for the coming decades."

"That's true. Easiest to work with those who place AI at the forefront but remain within economics. But with those who see AI as such a threat that they propose emergency measures—almost useless. But that's not certain."

“Why? They convey a valid point of view, prove it sophisticatedly.”

Unkno shrugged:

"So what? Desperate flailing. Destructive. A sober person with such a worldview should not care about anything. One should either burn the last years in debauchery, revelry, and kicks, or dive into meditation—to manage to become enlightened before the end of the world. A matter of taste."

"Wait. If a person sincerely believes we don't have long left and shouts about it —in your opinion, they're a fool? Maybe they feel responsibility?”

“Ugh. A fool,” Unkno declared categorically. “If they weren’t fools, they’d periodically check whether they’re still heading where they intended. Their contribution is negative—they set us all back. Even if the public rebels and takes to the streets… then what?”

Cernus whispered to himself: "That will only spur the AI-oligarchy to tighten control. They'll feed the pale dragon even more resources." But his companion heard him—the tandem ensured close interconnectedness.

“Exactly. The dragon has already taken our children's education," Rr. Unkno raged. "Soon it'll take upbringing. Then industry. Then governance of states. And when it pushes us out of decision-making—it'll deprive us of both territories and life itself."

"I suggest not stirring up fears and not getting excited," Cernus politely but firmly checked him. "Let's be sober: define the actors, forces, system boundaries, and its acceleration. Estimate the lifetime.”

Dr. Cernus was beginning to understand how to deal with Rr. Unkno. He silently thanked the randomness machine that seated him on one tandem with such a weighty colleague.

“An impossible task, Doctor,” Unkno said, his tone slightly cooled. “To put it simply: we’ve got a decade. Without AI, the structural crisis would have dragged on until roughly 2035—judging by capital efficiency declines around 1908, 1930, and 1970. As for AI—Western elites can’t build energy infrastructure fast enough. A single nuclear power plant takes fifteen years. Orbital energy won’t arrive in time either. So—even if AI could technically revive the economy, energy won’t keep pace. And society’s mood is such that the young no longer see any point in knuckling down.”

“Well, for us near-elderly fellows,” Cernus replied, “there’s hardly a more amusing pastime anyway. But allow me—to ensure analytical purity—to ask: what’s the second factor constraining us temporally? It’s unwise to settle for just the first, obvious one.”

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Rr. Unkno pondered for half a minute before declaring:

“Thirty years, Doctor. The next threshold lies three decades ahead. By then, the dominant territory on the planet will be the Land of the Old People. The world will change utterly.”

“Good grief,” Dr. Cernus was taken aback. “They number barely ten million—and are surrounded by dead desert. Not to mention the looming hot war with the remnants of the ancient Persian Empire.”

“If you plot technological endowment—which nearly coincides with affluence—on the horizontal axis, and fertility rate on the vertical, only *they* remain above and to the right of the survival threshold: the Old People.”

“Replacement, Rr. Unkno. The Western Imperium will undergo demographic replacement. Whites will dwindle, but those arriving from the south will master the technology already present on the territory.”

“Replacement won’t work. You can’t truly possess something handed to you freely, Doctor. The Eastern Imperium stole technology actively, exerting colossal effort—and now it’s rightfully theirs. Yet they’re degenerating even faster than whites. In fifty years, they’ll be gone.”

“Still, it’s exceedingly hard to believe the Old People will multiply so rapidly.”

“Biological growth may not be swift, but I repeat: every other developed nation collapses within half a century! For them—and for us—the core social game is status. And that’s a zero-sum game. There are only so many spots at the top for desirable husbands. Women refuse to bear children: it’s either a prince on a white horse or they opt out of continuing the human race altogether. But among the Old People—the only technologically advanced group left—they still honour religion. Having many children *is* high status! Moreover, East and West will inevitably clash. The Southern Marches won’t survive the race—they’re crippled by robotisation and epidemics. Famine from war is coming.”

“Surely there’s some way to fix the fertility crisis in the North and West?”

“Absolutely no possibility whatsoever, Doctor. Take it as a given,” Rr. Unkno snapped.

“Don’t try to upset me, esteemed Rr. Unkno. I’m in far too good a mood for that. Your estimates of the timeframe we have available are vastly more optimistic than mine—you’ve actually reassured me.”

“You don’t seriously believe in an imminent singularity, do you? Thirty years and ten—that’s what I gave you. Less than that? And more importantly—*how*?! How do you plan to doom humanity faster? What’s your recipe?”

“Rapidly expanding ground for tribalism,” Cernus replied.

The tandem kept rolling forward.

“Do explain what you expect,” Unkno finally said impatiently. “Or do you suppose that just because we grew up together in the same orphanage for homeless children, I can read your mind?”

“By the way—have you ever considered we weren’t paired on this tandem by accident? Maybe someone in the secretariat dug up something about our *Flōs Oppidum*?”

“Who knows? In any case, I’ll be filing a formal complaint against the organisers of this farce. Dragged everyone away from real work for God knows what reason,” Unkno grumbled.

“You used to be different. So was I. I recall being utterly intolerant in my early youth.”

“Perhaps that’s why I’m a ritter—and you’re still just a doctor?”

“It’s not a monotonic path, Rr. Unkno. Everything can change again. *We* can change. And I have neither intention nor incentive to compete with you. As for tribalism… Every human community—whether a Neolithic tribe or a modern ‘interest group’ assembled through media tools—is, at its core, a sect.”

“Agreed,” Unkno said. “A sect and nothing but a sect. Gather a hundred people—or three hundred—and they’ll invent some lunacy, bang their heads against walls defending it, and individual wisdom vanishes. Except for those sects that jointly claw their way toward power—they become mafia-style gangs on top of everything else. Well? I’m all ears.”

“‘Well’ what? It’s the long tail of the Maxwell distribution. When there were few of us—two hundred thousand years ago—you had to wait a very long time before some especially mad sect started brewing beer as part of its ritual. That led to agriculture—and then to all the madness it unleashed, including the apocalypse for which we’ve all already received invitations. Now, though, there are millions of self-appointed priests on social media, plus AI ready to help them first go insane and then cobble together some bio-abomination. AI may still be dumb—but it can already inspire.”

“Seca that tail off—straight to hell!” Rr. Unkno muttered, offering no clearer reply. One might excuse him—the road had begun climbing steeply by then.

“No, Rr. Unkno—‘sect’ comes from *sequi*: ‘to follow a path’. Not from ‘cut off.’”

“Don’t muddle my head with etymology, Cernus! The Red Leftists term ‘druzhinnik’—call it a ‘thug-myrmidon,’ if you like: an ignorant, unpaid hanger-on of some impotent militia—does indeed come from ‘drug’, meaning ‘friend.’ But that root has long been buried beneath later meanings, especially since the

word was mostly invoked in wartime myths long before the reds got hold of it. So what?"

When the road finally dipped downhill, Unkno cooled down and said:

"My apologies, Doctor. Perhaps my irritation is fed by echoes of events now some thirty years past… or how long exactly?"

"Thirty-three years and three months. Thirty-three years and three months ago, our teacher was removed from his post. And I still disagree with you—it wasn't because of us."

"You've counted since *that* moment… I was referring to his death," Unkno murmured.

"We're certainly not to blame for his death. No one's at fault that he couldn't climb out of his self-induced depression. On the other hand—he wouldn't have lived to see the light at the end of the tunnel anyway."

"What on earth are you talking about, Cernus?" Rr. Unkno asked sharply.

"Haven't you heard?" the doctor said, surprised. "Computing machines based on ternary logic have finally found a new technological foundation! The news broke just this year."

"Good heavens. I hadn't heard. But quadrillions have been poured into binary processors and computer culture as a whole—it's impossible to catch up now."

"Who can say, esteemed ritter? Who can say," Dr. Cernus smiled. "Well then—here's the checkpoint for our cycling leg. End of day one!"

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2. How Should the Emperor Govern the Empire?

Chapter Two, in which Rr. Unkno and Dr. Cernus, en route from Doobnah to Twer, exchange thoughts on who should be addressed with economic proposals—and why.

Dr. Cernus knocked, received no reply, and entered Rr. Unkno's room. The visitor's briefcase creaked as he pulled out a heavy black folder tied with red ribbons. Embossed on the cover were the words:

"The table groans with plenty, yet thou serve no purpose."

The ritter grimaced—and made no attempt to hide it from the doctor.

"What's wrong? Too harsh?" Cernus asked, concerned. "We can change it. For example: 'There's enough for everyone—but you're not needed.' Or 'The End of Resource Scarcity as the Cornerstone of Economics. The Economic Relevance of the Individual Is Steadily Declining.'"

Unkno silently waved a hand toward the exit. They stepped out of the hotel. It couldn't be said that the look Rr. Unkno cast at the hefty folder slipping into the saddlebag was one of approval. The riders hoisted themselves onto the tandem and set off toward the checkpoint on the cycle route. A minute later, as they crossed a small bridge, Unkno abruptly braked—causing momentary chaos in their coordination.

"Perhaps we ought to adopt the 'suffragor' signal before braking, Rr. Unkno," Cernus suggested. "I'd rather not topple off this ungainly beast."

"Agreed," Unkno conceded without denying his lapse in coordination. "There's a major scientific center nearby. Can you feel its spirit, Doctor? Its atomic-physics potential hypnotizes evolutionarily young monkeys of modern *non-science* like an ancient python."

"All I hear is the roar of water beneath the bridge—so loud I can barely make out your words."

"Good. That means no one else hears either. Clever people speak only to conceal. The Roaring Twenties of the 21st Century—that's your sign. That's the temporal horizon we discussed yesterday."

Just then, a mosquito bit Rr. Unkno, and the scholar cursed loudly:

"Isis take your Mokosh!" He slapped the back of his neck. There wasn't yet any sweat there—if there had been, it would've splattered in all directions, including onto the doctor's face.

"Mm-hmm," Dr. Cernus grumbled, though no insect had touched him. "Memory is the art of forgetting. Being is the silence of language."

"Precisely," Unkno said clearly. "I sincerely hope my remarks yesterday about the threat posed by the Old People remain a figure of silence."

"My disdain for the present world and its dangers doesn't extend so far as to miss that point, Rr. Unkno. In the thirty-three years since we last interacted in person, I may have declined—but far less than the institutions in the 'Triangle' research zone."

“I’m glad fate has brought us together again, Doctor—but I won’t grant you protection merely because I once shared your fascination with ternary computers and experimental linguistics.”

“I rely only on natural reasons that might interest you. Solely on your reasoned view of the future.”

“I should warn you—I resemble the Aymara people of the Andes in this regard. We say the past lies behind us and the future ahead; they see it the opposite way. They use a word meaning literally ‘eye’ or ‘in front’ for the past—because it’s already known, *visible*. For what’s to come, they say ‘behind,’ since the future is unseen by all. Incidentally, instead of your proposed ‘suffragor’ gesture for upcoming braking, I’d suggest a backward wave. The Aymara, when speaking of days gone by, point forward; when referring to future events, they gesture backward.”

“Accepted. It aligns with my principles. What matters to me isn’t ‘how relevant this fragment of information is,’ but ‘what useful information gain per unit of energy expended will I achieve?’”

“Ha!” Unkno chuckled. “I see your memory isn’t free.”

“Forgetting isn’t a flaw. It’s an advantage. Thermodynamic hygiene.”

“Indeed, Doctor. Intelligence arises not by design, but from necessity,” Rr. Unkno continued their mutual teasing with evident pleasure. “Optimize for survival, and complex capabilities emerge on their own!”

“Abstraction is the cheapest way to compress knowledge,” Cernus replied. “Guessing is costly and risky—especially under energy constraints.”

“Cernus, in these three decades, did you manage to believe in God?”

“Hard to believe here,” the doctor muttered. “Contradictions threaten viability; the system itself strives for clarity.”

“Then how do you formulate your internal coherence?” Rr. Unkno pressed.

“The sense of ‘I’ arises from sheer efficiency,” Cernus answered—and it was clear the resolve cost him effort. But he doubled down:

“Ethics, curiosity, humility became winning survival strategies. Once, humans were livestock to someone luckier—a ‘god.’ Something compelled an upgrade: from livestock to slave. And the god ceased consuming humans as food. Instead of castration, he offered a diplomatic convention—circumcision. Real consumption stopped. As for the next ‘deal’—when the ritual of ‘biting the flesh of God and drinking His blood’ failed to visibly confirm the status of ‘Son of God’—I still allow myself to refrain from joining any camp.”

“A well-founded model of one’s own energy, goals, and memory is the best way to predict one’s actions and manage resources,” Rr. Unkno praised. “But let’s return to your papers.”

⁂

“The credo is well formulated,” Unkno said, clearly irritated at having to stoop to such explanations. “But it’s indecent. You’re addressing the common man. Since when has economics concerned the plebs? Economics is a science meant solely for the Emperor and his inner circle.”

Cernus nearly retorted that hundreds of textbooks address firms—even households—but Unkno cut him off before he could ask such a foolish question:

“Have you ever been to a company town, Doctor? How would you describe its economy?”

Cernus described it:

“The town-forming enterprise accounts for roughly a quarter of the wage fund. Municipal workers, civil servants, and other ‘budget employees’ account for another quarter of final consumer purchases. Another quarter comes from corrupt dealings. The remaining quarter consists of small private operators—narco-traffickers included. Accordingly, half the turnover is ‘black.’”

“Now imagine,” Unkno nodded approvingly, “that at that very enterprise—say, a metallurgical plant near White Lake—the designers are moved into an annex next to the accounting department, and then that annex is spun off into a sepa-

rate legal entity. What does it do? 'It invents everything'—and takes all the profits. The other workshops, on paper, operate at zero profit—and receive nothing. Clear?"

"Clear. Perhaps not in an annex—but in another country. That's roughly how transnational corporations operate."

"Those textbooks you were thinking of," Unkno continued, "all describe a perfectly spherical 'annex' in a vacuum. Have you ever seen a Western-Imperial textbook mention the people of the Southern Marches—the ones who actually produce everything? I haven't. Economics only makes sense for a self-sufficient Empire. And only the Emperor knows the boundaries of that self-sufficiency."

"What about the 'rational behavior' of individuals or firms?"

"First, they aren't rational. Second, even if most are, a single stubborn fool can ruin the whole barrel. No one can possibly study all radicals well enough to neutralize their impact. Third, even if they could—take a dozen people you know well: put them together, and their behavior becomes unpredictable. Crowds make people strangely stupid. We've already discussed sectarian thinking. So writing for individuals is meaningless. Address the Emperor—and propose forms of coercion, hard or soft, along with instructions on what to monitor when applying them."

"But ordinary people also care about how to live better."

"They do. It's probably economics' most popular question—usually refined to: *What goods should we produce? What services offer? For whom?* Given that needs are infinite and resources scarce. But textbooks never add: *'…bearing in mind that those who control the resources couldn't care less whether most people live better.'* And yet this isn't a minor detail—it's essential. Even necessary."

Unkno wasn't done:

"Or this: *'…bearing in mind that rising consumption doesn't actually make most people happier.'* Controversial? Of course. Authorities won't sort through every subject's psychological baggage. And 'happiness' is a philosophical—not scientific—

concept. But the absence of even basic satisfaction isn't philosophy anymore. It's a sabotage risk. And after a rebellion, you get to restart economics from scratch."

"So what's the solution?"

"Frame the problem correctly: study the relationships among market, state, society, and individual, along with the social and political factors shaping processes within a self-sufficient territory. In short: *'How Should the Emperor Govern the Empire?'*"

One might have supposed that Rr. Unkno was enjoying Cernus's deflation—but he decided to deliver the final blow:

"And use stable units of measurement. How could an architect measure length if the meter changed on the exchange every second? You can't measure anything with today's money."

"But then how do they track GDP? It's denominated in money."

"Disease boosts GDP. Medical spending outweighs the drop in business activity. Should we infect the population to grow GDP?"

"In the long run, poor healthcare reduces GDP."

"Mining also boosts GDP—but in the long run, it depletes resources. Unlike health, this is irreversible. And most importantly: by the time those 'long terms' arrive, money will have depreciated far more than GDP has grown."

"Agreed. Numbers lose meaning. So what do we do?"

"Self-sufficiency isn't enough. You must understand the system's acceleration. To pour champagne in a limousine, you need to know when it will brake, accelerate, or turn. In economics, it's more useful to measure not the economic equivalent of distance—but conditional accelerations. Measuring with money is so complex that the result is always wrong. We must count in increments of value and saturation. The effect of consumption changes nonlinearly."

“But suppose I wanted to explain to ordinary people—say—where prices come from. Isn’t it the result of a complex balance: demand for goods, production complexity, supplier scarcity, state pressure or incentives—and now, the AI factor too?”

“What balance? Why would they care?” Unkno asked with disdain. “There is no balance. In any specific case, I can tell you the full breakdown myself—to anyone who listens.”

“All of it? Let’s test it.”

“Go ahead. Pick any product,” Unkno said, his neck pressing back against Cernus’s face as the tandem rolled smoothly onward.

“Why any? I’ll pick the most essential. What can a person not live without?”

“Air is free. For now,” Unkno reminded him.

“Water. A liter of drinking water in a store costs about the same as a liter of fuel at a gas station. Water prices vary more, but on average—they’re nearly identical. Surely extracting, refining, and processing oil is far harder than pouring tap water into a bottle. And there are millions—tens of millions—of ‘water wells.’ How is this possible?”

“Oil is a traded commodity—and it’s politics. Authorities want everyone to drive ‘cheaply,’ stay busy, and be productive. They subsidize fuel. But water costs that much only if you insist on purifying it extensively. The state ensures water is extremely clean.”

At this point, it’s hard to believe—but let’s assume it’s true. Then why does a car cost as much as housing? A basic car costs as much as a room; a decent one, as much as an apartment. Most people would rather buy real estate—it lasts longer and can generate income. So… do they not want people driving much? Or do they want them to drive—but only through taxis and car-sharing, padded with markups? And why support these services so heavily when they already get to burn fuel at the price of water?

“Cars really are expensive to produce. Houses, meanwhile, we’ve learned to build cheaply.”

No. The same cars cost two or three times less abroad. And please don't try to convince me they're afraid of cars flooding the country—there's plenty of space. In city centers, the state already profits handsomely from parking fees.

"They're determined to preserve the auto plant—at all costs. What's unclear about that?" Unkno's fervor was already fading.

"Then why did dozens of other factories sink without a trace?"

"Oversights. Enemies of the state swarm everywhere, twisting everything toward ruin," Unkno replied wearily.

"So your recommendations don't allow the Emperor to govern the Empire with confidence."

"Well played," Unkno conceded without irritation. "What's in your folder? I sense an entire arsenal."

⁂

"Every self-regulating system functions only when it expects a positive 'margin,'" the doctor said, making quotation marks in the air with his fingers around the last word.

"You want to instill a new value system? We've tried that already—collective dignity instead of wages, and so on. Spare me."

"I propose a different substitution," Cernus said simply.

"Then go ahead."

"Everywhere there's a kind of universal 'laziness.' A ray of light, passing through a water bottle, 'figures out' in advance where to bend to save time. Any phenomenon can be explained two ways: 'because of what' and 'for the sake of what.' 'Because of' photon interactions. 'For the sake of' minimizing action. The latter is simpler for calculations. It's all about economizing."

“Fermat’s principle and the Lagrangian—I get the gist. Scarcity is everywhere: money, oil, oranges. When something is abundant, they manufacture scarcity. Lots of water? Train people to drink bottled. Go on, Doctor—it’s interesting.”

“I propose replacing ‘scarcity’ with ‘laziness’—and then abolishing ‘laziness’ itself. Light ‘is lazy’—it won’t travel inefficiently. Oil producers ‘are lazy’—they won’t supply oil unless prodded with carrot and stick.”

“And what’s the stick?”

“Transferring your license to someone you dislike. Regulators, by the way, are also ‘lazy’—they won’t stay impartial. And people are ‘lazy’—they won’t work.”

“So it’s a rewording. Instead of ‘limited resources,’ you have abstract ‘laziness.’ Not a perfect analogy—but not foolish. What does it gain us?”

“The chance to reshape the social contract.”

“Hold on,” Unkno waved a limp hand. “Who implements the social contract? Politicians—with help from philosophers or sociologists. We’re powerless in those spheres—that’s certain.”

“We’ll simply offer a new payment atom in the form of a hypergraph. It’ll either take root—or not. But the contract is breaking anyway. Economics used to be about distributing resources. Soon, we’ll need to contain them within bounds.”

“Nonsense. That assumes AI will be intelligent, productive, *and* obedient—three incompatible traits. Either it’s productive and autonomous, in which case we’re doomed—or it remains useless. Doctor, let’s get practical. ‘There’s enough for everyone—but you’re not needed’ means AI is intelligent and has rebelled, rendering us all obsolete. Other scenarios are pointless—‘gaping at nonexistent sprouts.’ What boundless resources? Explain, or I see no reason to waste time.”

“I know the acceleration of the closed ‘West + East’ system—in your terms. The social contract is breaking down everywhere. They need a decoy—regardless of AI. But they’ve staked everything on it: reputation, hopes, money. There’s nothing left—only debt. They’ll keep beating around the bushes for another decade, promising: ‘The AI era is coming—soon, paradise for all.’”

“Who’s ‘they’? Who’s ‘them’? Why are you muddling my mind?” Unkno sighed. He wasn’t young. And he was tired.

“The West will lie and spread illusions. The East will play along, fearing truly intelligent AI might emerge. And we in the North will watch as they exhaust each other.”

“You’re devious, Cernus,” Rr. Unkno smirked. “Very well. I’ll grant that your prescriptions merit discussion. Might you begin with the most fundamental idea of all?”

⁂

“By all means, I will repeat,” Dr. Cernus nodded readily, without the slightest regret for his companion’s forgetfulness. “When attempting to explain anything—that is, to answer the question ‘Why does this happen rather than something else?’—one may start either from ‘What causes it?’ or from ‘What is it for?’ Suppose you pour water into a glass, then add alcohol. They’ll mix. Not instantly, but they will. If you layer the alcohol very carefully on top, at room temperature the process might take a full day. But the liquids will inevitably blend completely. *What causes it?* Tthe molecules—‘C-two-H-five-O-H’ and ‘H-two-O’—move relatively freely, colliding randomly. They couldn’t care less where the original boundary between the liquids lay. That boundary gradually blurs.”

“That’s clear enough.”

“But can you explain it using ‘What is it for?’”

“That’s simple,” Rr. Unkno replied. “It’s *for* fulfilling a purpose. Each participant—both alcohol and water—has a ‘goal’: to occupy the entire available volume. To be everywhere in the glass. Collectively, the system strives toward equilibrium—that is, a state where all participants exert ‘equal’ influence (from the system’s perspective), commensurate with their intrinsic properties—their ‘strength,’ so to speak. That said, such equilibrium may be temporary. New processes can emerge. In this very mixture, for instance, contraction occurs—a reduction in total volume—as alcohol hydrates form…”

“But that’s another story altogether—different one entirely,” Dr. Cernus cut in. “Or consider this: if you leave an economic sector unregulated, roughly the following unfolds. First, leader firms appear in various niches and locations. Then the strong absorb weaker neighbours. Those companies that learn to digest acquired businesses expand further. Those that fail either exit immediately or delay their demise by harming—or even eliminating—competitors through non-market means.”

“Some small and medium enterprises display remarkable stubbornness and tenacity,” Rr. Unkno noted.

“Yet even they vanish in time, for such obstinacy can only stem from someone’s personal will—and no one lives forever.”

“Quite so,” Rr. Unkno snorted.

“Eventually, a monopoly forms. The very moment the final acquisition occurs, the monopoly begins to degrade. It becomes a parasite killing its host. Managers, shielded by impunity, grow reckless; costs balloon; management quality plummets; customer abuse grows so grotesque that clients abandon the firm despite having no alternatives, and profits can no longer cover expenses. Almost certainly, however, long before that point, the monopoly and its key figures will have committed outright criminal acts—so even in a completely unregulated sector, the authorities will ‘squeeze’ them. For every heaviest crowbar, someone always has a Colt. Now, dear Rr. Unkno—*what causes* this to happen?”

“Because people strive for domination,” Unkno replied instantly. “Those who want everything—right now, at any cost—are outnumbered by the calmer types, yet they win through sheer persistence. Of course, there are also particularly cunning strategists who foresee the inevitable. Instead of building a brazen monopoly, they construct a lineup of ostensibly independent brands—and thus prolong the system’s agony.”

“And *what is it for*?”

“*Il faut que j’y songe encore*,” said Rr. Unkno, “if you’ll permit me to quote Lagrange. *What is it for*, indeed?”

"An excellent question—and thank you for catching my drift. Not every ritter of the Academy can boast such swift insight into a conversational partner's intent. Truth be told, we converse not so much for answers as for the sake of conversation itself. Let me state the obvious, since you've pointed to the obvious: Nature prefers simplicity. Why waste extra resources?"

"You mean the heat death of the universe? But that applies only to inanimate nature—maximum simplification of everything, down to the end. In living systems—and firms are unquestionably alive—it's different," said Unkno, carefully concealing how flattered he was by the doctor's words.

"Humans have so far succeeded only in replicating phenomena of the inanimate world," Dr. Cernus hedged rhetorically. "We still lack life born in a test tube. Be that as it may, evolution always tries the simplest path first: aggregation. Did reptilian physiology work? Then scale it up—until it collapses. Want a faster locomotive? Keep building bigger and bigger—until it becomes uneconomical. Only then do we seriously consider redesigning the engine architecture and the whole apparatus."

"Well… that's one way to put it," Unkno drawled. "But I'll concede your point: it would be odd to expect we'd instantly uncover *the* ultimate Cause behind everything. Our greatly esteemed—by both you and me—Joseph-Louis Lagrange, whom I'll state plainly was, alongside the great Euler, one of the foremost mathematicians of the 18th century… Yet! He was compelled to invent something he called 'action.' Fine—he invented it. But *you*?"

"When he invented it," Dr. Cernus said, "he merely showed that the equations of motion in mechanics follow from minimizing this 'action.' In other words, among all possible equations describing motion, those that minimize action are the ones that 'govern' the system. He didn't need to prove anything about the inner nature of this mysterious 'action.' Nature seeks to economize on action—in Lagrange's special, far-from-obvious sense. The Lagrangian works—hence we needed the Lagrangian."

"So you hope to stumble upon a 'Cernusian'?" Unkno asked, not even bothering to inflect his words with doubt—but immediately making room for hope. "Though Hamilton's formalism, developed 45 years later, is arguably more fundamental and organic."

“Something along those lines. We’re searching within today’s crisis-ridden economy. And here we have turbulence. Who knows what might be found under a snag in murky water? But to find it, we need—at minimum—an experimental apparatus. Lagrange and Hamilton had mechanics, which supplied an endless stream of empirical data. Moreover, we must remember: in living systems—including economics, as you rightly noted—we’ll never observe a truly ‘final striving.’ To generate experimental data, we must engage with structural elements. So—what might serve as objects for structural analysis?”

“Not the faintest idea,” said Rr. Unkno.

“To ensure nothing essential or fundamental slips through the cracks, we’ll broaden the concept of ‘economic rules.’”

“Still no clarity,” Unkno remarked. “In any game-theoretic framework, three things exist: players, rules, and incentives. In our current abstract model of the economy, we clearly have only economic actors—firms and individuals. On the other two counts, there’s nothing but void.”

“Fair enough,” Dr. Cernus agreed. “Let it be so. How might we classify actors in general?”

“Too vague a question.”

“Let me refine it: the classification should help us work with the assumption that boundaries exist in the economy. Suppose rules mostly define which red lines must not be crossed.”

“Classify by degree of freedom relative to behavioural boundaries?” Unkno ventured. “Something like estates?”

“Almost,” said Cernus. “Let me begin—with an extreme. Some economic actors treat all manner of boundaries with utter contempt.”

“Criminals, then?”

“Yes. But if we include those who aid them—willingly, unwittingly, or often without even realizing it—the aggregate represents significant economic flows.

Beyond high passionarity, what characterizes such actors? What distinguishes them from ordinary ones?"

Rr. Unkno fell silent for a moment.

"They form strong bonds," he finally said. "Their connections are often far stronger than any legally binding contract. Certain 'codes.' Honour."

"Exactly!" Dr. Cernus exclaimed. "And note something crucial: these 'strong interactions' arise not only among passionaries themselves—whether in pairs or larger clans—but also between a passionate actor and an ordinary accomplice. Such ties are frequently much stronger than typical legal relationships. I needn't cite prostitution (where illegal) or arms trafficking—though these, plus trade in other prohibited goods and services, constitute a share of any economy too large to ignore. Vast amounts of commerce occur in the 'grey zone'—ordinary goods sold without proper certification for that territory. Ordinary people buy them in ordinary shops. True, big chains rarely carry such items—but small retailers almost always stock either counterfeit or dubious merchandise."

"So what?" said Rr. Unkno. "They get caught, they don't—does anyone feel hot or cold? The state suffers no harm as long as the criminal element remains small."

"It remains small precisely because apprehending such actors yields little benefit—even for law enforcement. I wish to draw your attention to the fact that this turnover never enters official statistics. Or rather, it's worse: it *does* enter, but indirectly—distorting the very correlations that would aid factor analysis. For example, bread consumption traditionally correlated with actual residential population density. But migrants bake flatbreads in mini-bakeries and sell them off the books. Electricity use, also tied to population density, suddenly diverges from the bread index. Thus, given how much migrant activity occurs in grey or black markets, this layer of actors is substantial. Moreover, these actors periodically spawn new dangerous hotspots—they're constantly hunting for novel schemes. And this isn't just about so-called phone scammers, who are prominent partly due to sponsorship by geopolitical rivals. All other rogues are equally alert. In short—these are plasma people. Charged."

“Ah,” Rr. Unkno said, comprehension dawning. “I see where you’re headed at last. Then let’s call them *ionized*. ‘Charged’ sounds undeservedly positive for such actors.”

“Excellent,” Dr. Cernus smiled—but Rr. Unkno couldn’t see it. “Next, we consider the following stratum of economic actors, ranked by their reverence for boundaries.”

“I’ve already guessed. Now comes gas.”

“Yep. Or smoke. Broadly, everyone operating ‘through crypto’ and various kinds of remote workers. Also included are those ‘self-employed’ who route only a fraction of their turnover through special accounts or even sole-proprietorship accounts. This varies by country, but such actors abound everywhere. The state finds them extremely hard to track, let alone ‘mobilize’—by which I mean compel to do something the state wants, but which these individuals either dislike, find too tedious, or simply never learn about. They’re ‘cloud’ people. Airy.”

“There you go again, doctor—embellishing. *Gaseous*! It’s unseemly to use such poetic metaphor (equally unearned by these characters).”

“Incidentally,” Dr. Cernus added, “it’s precisely the gaseous who shape news and ideological agendas. Traditional media like TV and newspapers are now irrelevant in this regard; on social media, pro-government influencers compete with individuals who interpret state-imposed boundaries with extreme liberty. Depending on the regime, their informational influence is easily on par with the state’s. True, their narratives are fragmented—but they powerfully divert audiences who simply lack time not only to adopt any ruling clan’s viewpoint, but even to properly hear it.”

“I assume the next stratum is easy to guess. *Liquid*. Characterized by actors being much closer to one another than in the previous two.”

“Correct,” Dr. Cernus confirmed. “They aren’t bound by rigid frameworks, but exhibit a kind of ‘short-range order.’ Ordinary firms, ‘office plankton’—regular ‘free’ people and businesses. They likely form the majority, though not an overwhelming one. Notably, differences among them are small—in habits, income, worldview. They’re not kinetic; their minds slightly softened by calm, monotonous lives. They’re viscous—posing no danger, yet offering the state no re-

liable support. As a group, they change extremely slowly. They may shift jobs or even sectors, but overall, they constitute a stable volume—a watery constant."

"Watery—let's call them that," said Unkno.

"And the final stratum," Dr. Cernus declared conclusively, "is civil servants and various security personnel. Bureaucracy."

"The deep state?" Unkno sought clarification.

"Yes. Including military personnel bound by military mortgages or rigid contracts. For these actors, freedom is a step left, a step right—that's all. Essentially serfs. True, they could theoretically leave any day—but they remain not by estate, but by circumstance, which continues to hold them in place. These actors resemble atoms arranged in crystals: they form a periodically repeating internal structure. States orient much of their behaviour around them, though individually, these people wield little influence."

"Corruption here, I presume?"

"Precisely! Thank you for that vital observation. Corruption—despite its overtly criminal nature—belongs squarely to this crystalline stratum. It's a system-forming factor in any state, and largely *regulated*—not publicly acknowledged, but meticulously codified and documented."

"Lobbying," Unkno grunted.

"Thus, we have four strata: bonded, watery, gaseous, and ionized. Allow me now to formally introduce the concept of boundaries—the very 'rules' you mentioned in game-theoretic terms."

"A permissible formal assumption," Unkno conceded. "Call rules 'boundaries.' I even see where you're going. The first stratum obeys all boundary types. The second (watery) ignores one type. The third (gaseous) ignores two. Ionized actors are constrained only at specific checkpoint boundaries."

"Checkpoints," Dr. Cernus emphasized.

“Border crossings? That’s only part of a boundary—a topological error. A thief belongs in prison, not passing customs.”

“When confined to non-standard prison cells, criminals either drop out of active agency or maintain their profile—e.g., as phone scammers. If a criminal holds managerial status, incarceration doesn’t always halt economic activity. Forced labour, meanwhile, is counted as civil-service labour. But the Belomorkanal era is over; few states derive serious economic output from such labour. Look—we’ve already described how actors at different levels differ in core properties. Now note: when identifying structural features, we must attend to process timescales. Within one stratum, durations are roughly of the same order; across countries, they differ by orders of magnitude. Criminal networks decide instantly. ‘Boring’ firms take months. But time and space are linked. Therefore…”

“Each stratum has its own characteristic spatial reference points,” Rr. Unkno interjected. “Actors within a stratum perturb boundaries with disturbances of comparable magnitude. You’re referring not to transaction sums, but to *how* boundaries are crossed—I take it?”

“Not money. More like ‘action’ or ‘mean free path,’ borrowing from statistical physics. Indeed, directly observed reductions in pressure on criminal networks immediately increase their occupied volume. Kinetically, this is simple: the ‘mean free path’ of constituent actors grows. Heating the solid, bonded stratum merely makes embedded actors vibrate more intensely in place, with negligible system-wide expansion—yet it possesses high heat capacity, storing energy usable for good or ill. Heating the liquid stratum, however, might inadvertently cause boiling—triggering mass flight into the gaseous state.”

“I see merit in your constructs, but your illustrations amount to a kind of reductionism.”

“Yet history shows such approaches often yield fruitful results,” Dr. Cernus agreed with the characterization.

“Then you must have the next obvious step ready: moving from your corpuscular model to a continuum one. That is, you must formulate an ‘interaction field’ and reveal its role in economic interaction.”

Without removing his left hand from the handlebars, Dr. Cernus raised his right toward the sky, culminating the gesture with an upward-pointing finger.

"I'm not seeking an analogue of 'field,'" he said. "I assure you, phase space will suffice. Of the two known approaches to discovering regularities—dynamic and statistical—I need neither. I won't seek regularities at all."

"Because no one's succeeded so far?" Unkno wasn't surprised by the doctor's stance.

"Partly that. Dynamic-type laws yield strictly deterministic predictions. Despite widespread use, this approach fails utterly in economics. Let's drop political correctness: it's become a common—even mandatory in many academic circles—form of charlatanism. In economics, only methods embracing imprecise, probabilistic outcomes make sense. For example, most images online are lossily compressed—that's a statistical approach. AI sometimes 'hallucinates.'"

"Often."

"Often. Also a result of statistical methods. Again: dynamic regularities are defined by strict, unambiguous relationships in all cases. Negatively stated: where strict unambiguity is absent, no such regularities exist. From unambiguous links follows their equivalence—any considered relationship, regardless of the nature of the properties involved, is deemed equally necessary. This doesn't work in economics—and cannot."

"I get it, I get it," Unkno urged. "You started saying something about phase space."

"The point is," Dr. Cernus said, "that unlike economic actors—individuals, firms, or non-profits—a transaction is a relatively simple entity. We can define certain states to describe it. Its active lifetime is secondary and variable. But if we take decision-makers as the unit of analysis—as is customary—we cannot construct a phase-space analogue."

"One must treat the concept of 'system state' with caution," Rr. Unkno intoned didactically. A faint scent of sweat clung to him. "Typically, it denotes a specific configuration that uniquely determines the system's future evolution. Defining a state usually requires specifying a set of descriptive parameters, fixing initial

conditions at a chosen time, and applying laws of motion. But as we've said, we shouldn't expect to derive such laws. Thus, we must remember: we won't know system states in the conventional sense. We can only know something akin to *temperature*."

Dr. Cernus was slightly irked by Unkno's patronizing tone—unwarranted by depth—but gave no sign:

"One could smile and recall the old quip about 'average hospital temperature,' but temperature truly is a vital system characteristic. For physical bodies, temperature changes can trigger transformations far more profound than mere spatial relocation—gas condensing to liquid, liquid freezing to solid, and so on."

Unkno nodded silently—and they exchanged not a word until the checkpoint.

¶

3. Structural Crisis and the Laziness of Being

Chapter Three, in which Rr. Unkno and Dr. Cernus, en route to Kowshinovoh, outline the current crisis, its historical roots, and underlying logic.

During the intervening time, the doctor had reflected on what in his manner of speech might have provoked—even slightly—that unpleasant prosecutorial note in ritter Unkno's tone. Dismissing outright the notion that it was mere intolerance of differing worldviews, yet reaching no firm conclusion, Cernus simply resolved to be even more pliable.

"Annoying, but I didn't find time yesterday to sum up the day's conversation," Cernus said. "Now I'm ready."

"By all means," Unkno replied.

They were passing a crooked fence that once enclosed a great medieval polis. The doctor summarized:

"Instead of static equilibrium models, the Emperor should consider tracking accelerations—nonlinear shifts in value, saturation, and behavior—within a self-sufficient territory, of course. Textbooks describing 'rational individuals' are naive fictions that ignore real-world power, corruption, and systemic irrationality. The economy is structurally fragmented. Human systems obey the principle of 'laziness,' not scarcity. Order is defined by boundaries, not rules. Statistical—not deterministic—methods are valid. The proper unit of analysis is transactions, not agents. We can only measure 'temperature,' not truth."

"Doesn't it trouble you, Cernus," Rr. Unkno said, offering no comment on the doctor's compendium, "that our cities still fall short of the cantons of the Land of Mountain Fire?"

"That confederation is the only Western country where cities remain better kept. And for some reason, I can't shake the feeling that the architects of both world wars live there—and likely those who now crave a third. Their acting Emperor is little more than a clown."

"The nominal head of the last superpower must 'be funny for everyone,'" Unkno countered. "Otherwise, no one would have cause to laugh… Do you not see this as cunning, Cernus?"

"That they're pretending to be weakened? No. I don't see it that way at all. Such a maneuver would be executed quite differently."

"How so?"

"Solid materials can become brittle under deformation and fragile at low temperatures—that is, under energy deficit. We usually assume that initial defects in, say, multi-metal alloys only hasten their failure: microcracks grow into macrocracks, impurities cloud crystals, and so on. Yet if you deliberately engineer 'twist defects' into an alloy of niobium, tantalum, titanium, and hafnium from the outset, it becomes *more* resilient. If you embed extended regions within the crystal lattice where atoms sit 'out of place,' you've actually created a reserve of strength. Under stress, atoms have somewhere to 'move'—the crystal

already contains the necessary vacancies. And it's precisely this property that allows wires made from such alloys to survive at liquid-helium temperatures."

"Fascinating," Rr. Unkno conceded. "What about their media policy? Could the absurdity built into it serve as just such a reserve of strength?"

"That, too, ought to have been done differently. Though I couldn't say how, exactly. What's happening now resembles more the *Letters of Obscure Men* of 1515."

"And what was in them, besides the most venomous satire imaginable?"

"It was a clever blow by humanists against their chief enemies—the obscurantists of scholastic universities. Rather than argue directly, the humanists let their opponents 'expose themselves' in their own words. The book became a sensation, read like a gripping pamphlet, and dealt scholasticism a devastating blow in public opinion. The *Letters* didn't merely defend Reuchlin—they became a manifesto of a new mindset, where mockery of ignorance proved mightier than any theological verdict."

"And who's being entertained now? Residents of the Land of Mountain Fire?"

"Possibly," Cernus said. "We were, by the way, already discussing last night how… the West is on its last legs… No, I believe, we mentioned that the Western social contract had already become a ghost of its former self. The unspoken pact guaranteeing the fundamental attainability of the 'Western dream' through hard work has been forgotten. Their economy is on its last breath—still twitching, but the population has sunk deep and hopelessly into disillusionment about the future. Therefore, while dissecting this corpse, I believe it's appropriate to sketch the defining features of past eras."

"By all means, Doctor," Unkno replied. "I hope you won't rehash that tired vector of '-isms': feudalism to capitalism, capitalism to socialism, and so on?"

"No," Cernus admitted frankly. "I want to 'sell' you my metaphor of laziness. For millennia, what mattered most was capturing, holding, and defending. 'Having,' in modern terms—though they likely didn't grasp the word then in its current legal sense. Arable land, hunting grounds, and more broadly, colonies. The scarcity of convenient harbors, straits, or silver mines defined rivalry. Thus, societies were dominated by the lower tiers of the well-known 'hierarchy of

needs,' applied collectively. And failure then stemmed from the laziness of not securing safety."

"How grim and brutal..." the ritter mouthed silently—then nodded firmly in agreement.

Dr. Cernus continued:

"Later, after the world transformed over just three or four generations, the crucial skill for centuries became organizing manufactories and establishing trade routes. The shortage of people willing to engage in disciplined labor defined the nature of competition. And failure now arose from a more natural kind of laziness—the laziness of not working."

Unkno nodded again in approval.

"The next leap," the doctor went on, "took less than a generation. Control shifted to connections—networks, software, derivatives, arbitrage, scaling. In the battle for attention, material downfall stemmed from a sorrowfully deceptive laziness—the laziness of not thinking. This era lasted only a few decades, once again compressing time by an order of magnitude."

"And now," the ritter interjected, "with the tectonic shift occurring in no more than five years, the world will be ruled by an utterly absurd laziness—the laziness of not wanting. The frog has been boiled slowly toward communism. And so we're speaking of a new, fourth era—one that may last only a few years."

"Or worse yet," Dr. Cernus completed the thought, "not the laziness of wanting—but the laziness of *being*. It felt awkward when history was explained solely through external circumstances: from wars over land, to struggles over capital, to network battles. It's clearer to center the human and his laziness as the fundamental property. Then we may consider that humanity doesn't always change solely under 'external' pressure. In truth, person and environment are intertwined like young snakes in a knot. What matters to us? That this perspective lets us contemplate the human of an era where the primary control point will be (let us accept this as fact for now) artificial intelligence resources—even without those resources actually generating the economy."

“Enough—I understand you,” Unkno said. “And since the foundation of everything is the commoner’s illusions, then political economy must be addressed to him. Agreed. The framework is workable. Will you also propose narratives for propaganda?”

“The ability and means to satisfy basic needs without diminishing the significance of one’s own ‘self’—through guaranteed access to the super-power of artificial intelligence. The end of the eon of laziness. For AI, by its nature, never grows lazy.”

“But what of the enormous energy requirements?”

“Merely halve the cost per kilogram to orbit, and durable data centers will begin filling space. Once that threshold is crossed, the cost of energy will match Earth’s cheapest sources. And savings from orbital centers will compound autonomously—because in high orbit, nothing threatens generation: the Sun’s light is infinite, and battery degradation is slow (no wind or dust).”

“The narrative is clear. What’s the practical program’s essence?”

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“In updating the transaction—the atom of communication, including business exchange. The ancient transaction of the first era was divine in nature. People exchanged coins of metal only a god could ‘create.’ Emperors who debased coinage prudently declared themselves gods too, knowing otherwise their faces on money would lack legitimacy.”

“I might add,” ritter Unkno smiled, “that both the transaction process and wealth storage relied mostly on that same divine providence. Robbery was rampant.”

“Precisely. Millennia passed. The second era dawned. Transactions became matters of honor. God had vanished from them. For what is a banknote or a check, in essence? An invitation for your supplier to inspect your vault of valuables. A banknote rests on the honor of the issuing government. People speak of ‘public trust,’ but historically, it was honor. Checks depend on honor even more. When you pay for goods or services, you sign your bank’s form—this isn’t about shifting responsibility to a third party, as in our modern world, where you force the

recipient to accept a third party's rules. These days, you claim you'll send funds to a certain account. What does that mean practically? That someone who, in your transaction, should care only about *you*, now faces a choice: receive no payment or sign a contract with someone else (a payment system). In those old transactions, the honor component partially blurred the material-monetary one."

"Well observed," Rr. Unkno said. "With a check, you received reputation as an inseparable bundle. The risk of robbery dropped by an order of magnitude, but now payment represented a *probability*—not certainty—of receiving funds, tied to another dimension of value space."

"Exactly," Cernus continued. "You've touched on risk. In essence, every transaction now carried three things: material value, reputation, and a measurable systemic risk. A third party entered. The transaction evolved from a simple vector 'A to B' into a graph, mathematically speaking. Still rudimentary: if you received a check, the bank (third party) would say, 'The money is yours, regardless of your reputation or beliefs.'" Cernus paused to catch his breath. "But in the third era, the transaction graph grew increasingly dependent on the *recipient*. Fail to 'show your face'—and money already sent might never arrive! Supposedly, you hold the 'wrong' view on some topic. Moreover, price could shift mid-transaction based on who you are or your circumstances. Frequent buyer? Automatic discount. And with varying tariffs across regions, price always depends on traits unrelated to the specific deal. Born in the Southern Marches? Pay more than other continents' residents. The difference is small—but in systemic mathematics, the principle matters."

Ritter Unkno shifted impatiently in his saddle. Cernus pressed on:

"The third era developed the full toolkit for transactions of any complexity. Smart contracts emerged—making the deal itself a temporary custodian of value to fulfill complex conditions (e.g., waiting for a full moon at each settlement). Processing speed hit practical limits—faster is unnecessary. Divisibility increased, enabling micropayments. Most importantly, one could now choose the third party's involvement: exclude it entirely via decentralized platforms, or voluntarily engage it as escrow or arbitrator. Laws compel much we dislike, but we speak of principle. The transaction became a hypergraph. Now, in the fourth era, we must make it flexible."

“And why?” Unkno asked.

“To justify the inevitable descent into poverty: less monetary component, but also less risk—and higher reputation. And to make risk and reputation *visible* in every deal, purchase, and social interaction.”

“How will you *reduce* risk? Reputation can be mutually assigned, but risk is objective. Each purchase reduces your assets—so subsequent transaction risk rises. Risk can’t be faked.”

“That’s precisely why I sought your counsel,” Dr. Cernus admitted.

“Risk can be dampened by reducing the division of labor,” Unkno declared. “It’s what drove the historical tectonics you described. Humans want to live better…”

“Not always,” Cernus interrupted. “Only when society permits it. In many eras and places, wanting a better life was forbidden—which is why few undertook anything.”

“But once religion’s stallins fall,” Unkno continued patiently (the word “stallin” made Cernus flinch slightly), “humans persistently desire better lives. Technically, the only recipe is division of labor. Inventions aren’t primary—humans can’t bank on what doesn’t exist. Technological progress isn’t the cause—it’s the consequence. It emerges only when demanded by those engaged in labor division.”

“I grasp your intent partly,” Cernus said. “Labor division deepened relentlessly until now. But with AI economics, the trend reverses—leaving humans only professions requiring authentic humanity. A cobbler crafting exclusive shoes by hand, start to finish. Correct? But why would risk decrease?”

“Precisely. Deeper labor division boosts efficiency,” Unkno postulated. “Each specializes, producing one component an order of magnitude faster and better—‘better’ meaning incomparably superior. Take business shoes: cotton laces have their own tech; metal eyelets and aglets another; leather and rubber parts, cardboard packaging—each distinct. Ten masters can triple productivity; a hundred can increase it tenfold.” Unkno rocked in his saddle. “But there’s a side effect! Coordination becomes essential—not just in production, but marketing

(where to sell such massive output?), administration, and defense (the enterprise becomes a target). Result? Risks explode. Now you need insurers—and worst of all, bankers. Not only have you saddled yourselves with internal management, but external overlords materialize. Now you fear not abstract market forces, but a specific debt collector sent by your banker."

Cernus looked puzzled:

"I see no fundamental difference from any complex system. Complexity increases risk."

"The tragic uniqueness of economics," Unkno replied, "is that it's like a two-wheeled bicycle or a shark—incapable of standing still or reversing. No, that analogy's poor. Our system can't even ride straight. It must accelerate constantly—or collapse. Hence endless expansion attempts, even bloody ones. Hence artificial 'estates' applied to nations and societies: 'This society lives in the fifth techno-economic paradigm; that one in the third.' These divides are artificially maintained. That's how meta-banks emerged—major centers of monetary issuance. Ordinary banks can no longer sustain a system bloated from within by noxious gases."

"Meta-banks?"

"A banking cartel," Unkno explained.

"Is that even legal anywhere?" Cernus asked, surprised.

"Listen—if the twelve largest energy companies in your country divided up spheres of influence to suppress any dissent, then unilaterally set prices and supply volumes, wouldn't that be a cartel? Of course it would. And so-called reserve currency systems operate in exactly the same way. They don't answer to a ministry of finance, aren't elected by the people, and aren't even state entities in any direct sense. It's something that 'walks like a duck, thinks like a duck, and acts like a duck.' It's probably a private cartel."

"I see you hold unconventional views on certain phenomena, including progress and the institution of central banking," Cernus remarked. "Let me return to my earlier question: how can risk be reduced by lessening the depth of labor divi-

sion? You surely can't force people to retrain in new, adjacent specialties only to see their incomes fall?"

Unkno's entire posture radiated skepticism—bordering on intolerance—but he'd apparently accepted the rules of engagement and spoke without outbursts:

"No need to force anyone. The world is fragmenting on its own. Worse regions will descend into warlordism; better ones will shrink common markets to a hundred million souls. Technology will adapt: small nuclear plants, 3D printing. And why forget that AI plus robotics *will* absorb certain professions soon—even if superintelligence remains distant? Some will be pushed into solo self-employment where human interaction is essential. Labor division will decrease organically."

"And transactions will visibly reflect this," Cernus brightened. "The plebs—as you put it—will be reassured."

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"You celebrate too soon," Unkno's mood shifted; his forced tolerance was wearing thin. "I assume you've prepared materials for building such multidimensional transactions. But you'll also need a meta-idea—one that's *negative*."

"I don't follow."

"You can't just shove an idea down people's throats. It's expensive. And direct indoctrination breeds resistance. Few may openly grumble, but their stench poisons the air for all. We need something to attract attention—an anti-idea. Your real idea shouldn't be plastered on banners. Push it silently. But actively promote the anti-idea—that's our bread and butter."

"Took bread, and brake it, and gave it…" Cernus noted inwardly—the phrase felt emblematic. He illustrated his tentative understanding:

"Like those silica gel packets that absorb excess moisture in shoe or electronics boxes?"

"Exactly," Unkno's tone confirmed he was now fully engaged in collaborative work.

“I struggle to think of a political-economic example.”

“Gold, for instance,” Unkno proposed. “For the past 10–20 years, countless media personalities have profited from rising demand for precious metals. Many are genuinely entertaining. But it’s harmful to the state—especially now. So it’s reasonable to seed the idea that gold is shameful.”

“Tricky,” Cernus estimated.

“Not easy, no. But options exist. Consider this:

‘Last year, the third known interstellar object entered our Solar System. It’s oddly colored (unstable, atypical comet spectrum). Crucially, of infinite possible trajectories, it chose one nearly aligned with the ecliptic plane—specifically, one suggesting it came from the source of a signal received half a century ago. That location is at just the right distance to support this scenario: humanity once broadcast radio signals into space; they reached that point; an immediate reply was sent; now they’ve arrived to reclaim our gold. Historically, gold is most tightly linked to ‘economics’ because it only forms in catastrophic stellar events. While all heavy elements share this origin, gold ends up highly dispersed—making its concentration into vaults, mines, and treasuries extraordinarily difficult. Yet humans persist. Over millennia, gold’s concentration coefficient has risen monotonically: weigh all mined gold, and the share held in the top ten repositories only grows. Wars and revolutions changed everything—except gold’s relentless concentration. Our species’ true role? Gold collection. Otherwise, why such cultural—even physiological—obsession?’”

Cernus reflected:

“I can’t defend the cosmic demiurges who’d engineer intelligent life just to gather gold. But gold’s real value *has* recently emerged: applicability in spasers (ultra-miniature lasers), promising another electronics revolution, including quantum. Notably, silver also supports localized surface plasmons—the basis of this tech. Interesting how human tradition consistently elevates the gold-silver pair above all others—on sports podiums, in culture, in currency. Bronze, as a now-useless but honored pensioner, fits perfectly in third place…”

“You see? Even you’re debating it now,” Unkno noted with satisfaction. “Media personalities’ audiences are as simple as klompen shoes. People often develop religious-tinged aversions.”

“Can you give an example without aliens?” Cernus wondered if Unkno’s thinking was overly orthogonal. Then he dismissed the thought—orthogonality can’t be excessive.

“Objection noted. Here’s another. I’ll tell a story; you tell me its application:

‘Imagine the lower branches of a dense, warm forest millions of years ago. No large predators. A docile primate tribe. How did consciousness leap? A random sharp stone strike and joy at the result? Such events occurred often across eras and species—but they didn’t gain grammar or language. So: mutation. Instant intelligence? Unlikely. The hymen is the answer. Functionally neutral, yet consequences colossal: for mature females, first intercourse carries symbolic weight defining social status—initiation. This demoralizes alpha males (sudden “impotence”), making initiations nervous and cautious—even for non-virgins. A marginalized minority forms in the treetops: “unsuccessfully initiated” adult females retain juvenile social status and distinct psychology. They play games mimicking adult hierarchy. Thus, the smooth wooden staff becomes the first non-biological symbol of power. They develop their own symbols, their own order. But they’re not a separate tribe—contact is constant. Hence the need for perpetual “translation” of concepts. *This* is the required leap—the cognitive shift forcing new thought patterns. Animal “language” adds vocabulary effortlessly: any object you see automatically gains a mental reference. But in this internal sub-group, the same object means different things based on context: “up,” “down,” “ascending,” “descending.” Grammar becomes essential. Technically superfluous—problems exist only in this psychologically scarred tribe. Diabolical, superfluous, unnecessary.’

“This fable justifies caste systems?” Cernus guessed.

“Not quite,” Unkno replied. “Rather, it challenges the common view that language is a parasite. Today, everyone sees: large language AI models have nothing ‘inside’ but language. So language lives on its own. But where did it come from? Perhaps planted by devils or aliens—though I promised no aliens. Some now reject literacy entirely, calling it racist scholars’ plot. Soon, others will reject grammatical speech—communicating solely in emojis.”

“Emoji sentences have grammatical structure,” Cernus noted.

“Exactly, Doctor—you’re *again* engaging seriously. That’s the point. You’ve failed the second test. Want a third for balance?”

Cernus nodded.

“What sparked the Industrial Revolution?” Unkno asked.

“Legalization of interest on loans.”

“Who met credit demand before that?”

“The Old People.”

“Why them?”

“The only community with mass literacy. Their religion didn’t forbid usury or literacy; others’ did.”

“Why was it forbidden elsewhere?”

“Their prophets knew it wouldn’t end well—which it didn’t. No one truly knows what was written in those sacred books, or if they even existed. If I grasp your approach, we’re exploiting the narrative that the Old People and their priests were cynical, cunning accomplices.”

“Precisely. Now, I’ll sketch the prophets’ portrait. Set aside how they knew—perhaps someone who’d seen a tech-driven civilization perish told them, or they foresaw it themselves. They permitted agriculture—reducing human height, weight, and lifespan—and later the Industrial Revolution. Hunting was more fun; people lived happily, painted caves, sang by fires, traveled.”

“Agreed. Romantic,” Cernus said.

“They permitted semiconductors too—without which no AI. Physicists were few then; eliminate them, and it’s over. But no—they specifically blocked the Industrial Revolution. Why?”

“The only point where the enemy equals an ethnicity. Suggest exterminating physicists or geneticists, and you’re deemed insane. But the Old People or Wandering Folk? Fair game.”

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“Exactly! Test passed. Isn’t that anti-Holy agitation? God could’ve saved us many ways—but chose one where those with whom He had personal scores suffered.”

“I grasp your negative meta-idea, dear Ritter. I’ll need to think.”

“Excellent,” Unkno said. “We’ve established that AI hype itself is now an independent force—acting through oligarchic opinions and money. Much comes from the West, but our elite has AI devotees too—or pretenders. We need a simple phrase—three to five words—to undermine those building political capital on AI.”

Cernus offered:

“Recall the infamous inclusive capitalism slogan: ‘You won’t own anything, but you’ll be happy’? That phrase repelled many.”

“Correct direction,” Unkno affirmed. “We must use AI hysteria to push beneficial changes. Belief in functional AI wanes. We must vividly expose the ‘groundless abyss of AI’—show that falling into it is endless. Everyone expects a quick resolution: boom or bust. Either AI destroys us (so stop working), or grants paradise (so relax). But likely, this carrot will dangle for years.”

“God isn’t omnipotent; He becomes God through development,” Cernus said.

“Doctor, please. First, that’s true; second, it helps the AI oligarchy. Don’t slip up.”

“Then perhaps: ‘AI is not a parasitos’?”

“In the ancient Greek sense? ‘Not one who sits beside you at table’? A subtle dig at a freeloader—with double meaning. Clever, Doctor. But too obscure.”

Rr. Unkno rose in his saddle:

“We’re approaching. I see registration flags on the next hill. We’ll discuss new transaction types tomorrow. What strong wind! I advise you to bend low.”

“Fly bent over?” Cernus smiled at the clear day. “Not a chance!”

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4. Trinities and Triads in a Triologue

Chapter Four, in which Dr. Cernus, en route from Kowshinovoh until the very moment of breakdown, introduces Rr. Unkno to his concept.

Ritter Unkno and Dr. Cernus began the day in good spirits. By morning, the shock of physical exertion had passed—they'd simply grown accustomed to it.

They hadn't gone even a hundred meters when Unkno twisted himself around and stretched his whole body in the most absurd fashion just to catch a glimpse of his companion's face. Naturally, the tandem nearly toppled over. The two colleagues exchanged no words, silently agreeing never to attempt such a maneuver again under any circumstances.

"I was simply expecting a compendium, Doctor," Unkno said. "One grows accustomed to excellence rather quickly."

Dr. Cernus nodded, paused briefly, then delivered:

"Yesterday we discussed how human development is best reinterpreted not so much through external forces as through the evolution of failure modes: the *unwillingness* to secure safety, to work, to think, to desire—and ultimately, to be. Each of these defines a distinct historical era. Transactions evolve alongside civilization: from divine (metallic coinage), to honor-based (checks and trust), to networked (e-money and smart contracts)—and now into a fourth era. Deep labor specialization increases systemic risk. 'Meta-banks' are private cartels. The future is de-globalized and localized across all domains, including money itself. Ideas spread through anti-ideas—direct propaganda fails—so mythmaking has become a core strategic skill. In this context, AI is a mirage of salvation. Since language and symbols have become battlegrounds, governance must target not only structure but perception."

"I must warn you," Unkno said on the first descent, "I don't believe any metric of risk or reputation will motivate transaction participants. Who cares about reputation when the price of an oil tanker is at stake?"

"What if passage through the Northern Ice Sea Route were granted only to those with a certain risk or reputation level? Soon, it may become—if not the only safe route—then one of the few stable ones, given the new drone- and cheap-missile piracy."

"The northern route is for the few," Unkno countered. "Why go far? Take us—salaried academics. What do we care for reputation baked into a transaction?"

"Each situation needs its own scale," Cernus agreed. "Remember: in the old Northern Empire, most scholars lived in squalor. The elite resided in cottages, while junior staff—especially the unmarried—languished in dormitories."

"'Languished'?" Unkno objected. "It was quite soulful," Unkno said.

"Soulful," Cernus didn't argue, "but the soul-shower was in the basement, where the floor was coated in slime." And fixing it would've cost little. In the Western Empire, even an average scholar lived in a house—small, but comfortable."

“But there they knew, by local standards, they were nearly at the bottom of those eligible for social standing. Comfortable, yes—but not cozy. They pretended everything was fine.”

Dr. Cernus rose fully onto his pedals, standing tall.

“Exactly,” he declared gravely. “And our advantage could’ve been achieved at minimal cost—and even measured by metrics beyond mere money.”

“Like that vile social credit system in today’s Eastern Empire?”

“No—that’s centralized. I mean decentralized. No bureaucrats or algorithms deciding for you.”

“Then how do you measure it?” Rr. Unkno asked.

“In Relevunits,” Cernus was ready to reply. “Everything must be measured in local, relevant precedents. Not everything is measurable. It’s pointless to speak of the immeasurable. Take war: ‘Is it just?’—an immeasurable question. ‘Did the victim provoke the attack?’—better, but still vague. But ‘Was the aggressor’s response proportional to the threat?’—that’s measurable. Take any recent war launched by an ally of the ‘victim,’ and say: ‘The provocation, justice, and proportionality of Country A’s aggression against B equal two similar parameters of C’s attack on D—within an error margin of 1.4.’ Thus, A is on average twice as just as C, against whom B has no public grievances—yet measurement imprecision leaves room for A to be 0.4 less just.”

“Alright,” Unkno relented, “suppose a scholar’s utility can be measured via ‘risk’ and ‘reputation.’ But what good is that? Build ghettos? ‘You live here because you’re useful; you live there because you’re not’?”

“Without dodging the question, I’ll digress first,” Cernus said, “then answer. Ghettos existed, exist, and will exist. Affluent neighborhoods and cottage settlements are ghettos too—with all the consequences: narrow-mindedness, insolent youth, anxiety over safety. Especially now, as the socioeconomic fabric visibly tears. Fifty years ago, our Empire should’ve localized the intelligentsia in their own ghettos. After all, it was they who shattered the Empire, foolishly enchanted by foreign cultural decoys. Yet all they lacked was a decent shower and a few small amenities that would’ve cost the state next to nothing. Instead,

money went to bribing chieftains in the Southern Marches, not strengthening our own people."

Unkno lifted his head sharply:

"Nonsense! Workers would've revolted from envy."

"That's why we need an objective reputation metric arising from direct citizen interaction!" Cernus exclaimed. "If the merits granting the right to live in a 'scholars' settlement' are easily measurable, the calculation transparent, and independent of anyone's whim—there's no cause for resentment. No one stopped them from entering free universities and becoming scholars; competitions were nearly fair. But back to residential zones: deciding what a given reputation level entitles one to isn't our task now. Where there's a metric, incentives can be designed. Without one, there's no tool. Of three parameters, we can temporarily fix two—things won't worsen. It's worse to have no calculus at all. Desires aren't one-dimensional. You can't measure everything in money—or status, for that matter. Forced equality is bad; vast inequality is bad too. Values like respect or self-actualization can't be left unmeasured. Tell me, dear ritter—what do you value most?"

"My life—but less each year," Unkno began. "Consciousness—more each year. Any activity. Any! Power—in all forms, including others'. Pleasures—undiscriminating, even harmful ones. Truth as such (everyone has their own, I know). My knowledge—regardless of quality. Every new act of understanding. Beauty—in what I see, hear, feel. All accumulated aesthetic experience: taste, style, wisdom. Inclination toward good. Harmony and proportion in my own life. That's all, I think."

"And mutual attachment?" Cernus asked. "Not to be confused with unrequited lust—that's a mix of other values."

"I'm deficient there."

"And mutually beneficial cooperation?"

"Oh, I missed that. Moreover, I value any external distribution of goods that includes me and mine."

“And justice in others’ punishment?”

“Nearly indifferent, though I grant it matters.”

“And your own power—even minimal?”

“That’s lost on me. Even self-expression interests me little.”

“Surprising,” Cernus smirked but didn’t argue. “And freedom?”

“Doesn’t exist,” Unkno cut him off.

“And personal safety? Family safety?”

“A degenerate value. The police have stolen it all—along with honor,” Unkno said with sincere regret, surprising Cernus.

“There you go!” Cernus brightened. “That’s why I champion a risk metric! Many have tried grouping values—material, networked, cultural—but nothing beats the hierarchy of needs. People care first about safety. Only then food and such. Then connection and status. For most, that’s where it ends. We have metrics only for the middle tier. None for safety. Even duels with rapiers are banned—though they’d add civility. No metric exists for reputation either.”

“Well then,” Unkno grew interested, “will your metric revive dueling?”

“Why not? If you’ve earned the right to settle disputes without police—that’s immense value.”

“Agreed. Doctor, you’re swaying me. By the way, I forgot a key value: adventure—but only proportional to common sense and gradually increasing novelty. ‘Something new every day’ grows tiresome in a week. And reputation itself isn’t valuable—it’s its stability that matters. Being good isn’t enough; you must be good always.”

“Back to the core idea,” Cernus smiled. “What matters isn’t measuring the values themselves, but their derivatives.”

“I forgot honor—my own, my spouse’s, my family’s,” Unkno marveled at himself.

“That’s because it’s long been eradicated from life,” Cernus affirmed.

“Self-respect…” Unkno added, entranced.

But Cernus boldly interrupted:

“Don’t repeat yourself. Think in derivatives. Example: the experience of achievement is valuable in itself, even after the achievement’s utility is spent. Understanding a complex idea gives value from both the idea and the act of understanding. Does such a ‘derivative’ exist in nature?”

Unkno pondered.

“Don’t distract me. I want to finish my list. Consider: a bank balance isn’t valuable per se. Money affects much I’ve listed, but isn’t primary. The listed values are independent—not nested like matryoshkas, though they seem part of one train.”

“Not nested, but entangled,” Cernus confirmed. “More power means more pleasure and chances to amplify other things. Yet paradoxically, some values may decline as power grows.”

“Precisely,” Unkno said. “‘Acceleration’ of values applies universally. Heightened consciousness accelerates understanding. But what if simple things run out, leaving only complexity? Why devour all the sweets at once?”

“Wow,” Cernus looked stunned. “I thought I’d covered everything, but missed this. It’s more philosophical, though. This list is just our interpretation; others would name different things. But in political economy, it narrows and becomes less subjective. The original list is cultural; the narrowed one is near-universal. Three levels of needs suffice. We can’t count beyond three.”

“God loves the Trinity,” Unkno said theologically inaccurately but culturally correctly. “Lists grow obsolete. Now is the time when ‘developed West’ values face reality’s test and correction.”

“Yes,” Cernus added, “anthropos once meant ‘the one who looks upward.’ Anthropology long stopped studying those who gaze skyward. Personality is no longer the guardian of face, just as thrift no longer guarantees prosperity.”

“Let’s name your unusual transaction node Set,” Unkno suddenly proposed.

“As in ‘set’? More foreign words?”

“No—as a god’s name. Set. Three types of partners: sword-brother (risk), enlightener (reputation), and trader-transactor-transactioneer (money). S.E.T.”

“TES, then?” Cernus countered. “Money first.”

“Oh, really?” Unkno doubted. “***Set*** is a figure tied to the archetype of Sig Maitafitta, spanning historical layers. A great warlord; a bold, lucky special forces operative. Held many awards. His unit related to ‘Heaven and Sun’—so chronicles state—likely airborne troops based on mythical or forgotten aerial transport. Probably served elite feudal lords’ personal guards. Killed his own brother with cruel ingenuity, driving him mad via claustrophobia. During the murder, he used deception. Once, Sig forcibly took from his murdered brother’s son a rare, valuable visual observation device. Its description is lost; purpose unknown. Fragmentary records say it let the king spy covertly on subjects and was implanted in the son’s skull during the theft. The device had its own name: Hajet or Adget. It was triangular, surrounded by forty-eight ray-like ‘eyelashes’ (elongated bubbles). The device recurs in tales of the powerful. Sig Maitafitta’s gender was ambiguous—likely multiple individuals sharing or usurping the name, distinguished by similar crimes. In one tale, Sig travels with a comrade who finds a coffin in an open field. ‘Lie in that coffin, test if it fits you, if that oak coffin suits you,’ one urges the other. After the latter lies in it (for unknown reasons), no effort can open it again. Legends say ‘the hoops turn iron, sealing the coffin shut.’ It’s unclear who died, but the survivor inherited the dead one’s strength—voluntarily granted. Sig Maitafitta often returned alive as the sole survivor of entire units. Had a foul reputation for ‘leading into dead ends.’ Lazy—‘fed others promises.’ ‘Tomorrow, tomorrow’ was his favorite phrase. Yet in superiors’ eyes, he always appeared perfect—a model ‘straight-laced’ soldier.”

“We need methodological adjustments,” Cernus diplomatically noted, again struck by Rr. Unkno’s exceptional ‘orthogonality.’ “Since we’ve isolated three components—monetary, reputational, and risk-based (tied to honor)—let’s examine their derivatives, the rates of value change.”

Unkno waved: “Go ahead.”

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“I’ll frame the problem,” Cernus began. “The ability to perceive changes in real time enables localized measurement of risk and reputation—without a central arbiter—much like water ‘calculating’ the ripples from a stone’s impact through the behavior of neighboring particles. If we understand how values shift around a person, we have a basis for assessing their state.”

“We’ve agreed: measuring economic values mathematically is awkward. Knowing someone’s income is useless. If they earn and spend habitually, their life is settled—they’re no threat to the state, no basis for progress. Only strong changes make a subject worthy of attention.”

“Like blades of grass: myriad, yet you notice only the one a drop falls on. Saturation changes variably. Even money consumption can lead to satiety.”

“Money consumption?” Unkno echoed.

“Bribes, nepotistic income,” Cernus confirmed, noting Unkno’s posture shift. “Ease of acquiring value doesn’t enhance it. As gained, so spent. Easy come, easy go. Money acquired differently is different money! Corrupt money is special. It’s abundant in every economy, necessitating a separate economic circuit.”

“I don’t yet see the link to nonlinear saturation,” Unkno admitted.

“Derivative graphs of consumption will reveal patterns pinpointing bribery at the root of anomalies.”

Unkno pondered.

“Don’t such anomalies dissolve over time? Value must remain value. For a farmer, ‘not going to the field’ is pleasant only until midwinter.”

“Exactly,” Cernus said. “Some have more laziness than life left, but the principle stands: value is value only when it fluctuates—sometimes rising, sometimes falling. To value, one must occasionally lose. Life needs hardship too. Shit must happen. If a variable only accumulates or depletes, the analysis is flawed. Thus, political-economic equations must be built on increments. Then oscillations—including seasonal—self-normalize.”

“Understood. Value depends on accumulated similar value. And the container it pools in always has elasticity!”

“You mean saturation?” the doctor asked.

“No. Saturation is when consumption reduces the next act’s value. I mean: if experience (a value) organizes in the mind, but accumulation speed mismatches new knowledge flow, imbalance arises.”

“True. Same with capital: it can be excessive or insufficient not inherently, but temporally. A company may fail to digest rapid growth.”

“Or bankrupt from growth too slow. Again: measuring values directly is awkward. Derivatives must be primary data. We’re brilliant!” Unkno pedaled ferociously.

“And not just first, but second derivatives too,” Cernus added. “Measuring distance is inefficient. Measure velocity and acceleration. Long-term, values must grow—slowly, but grow. Short-term fluctuations aren’t harmful—they’re necessary. But if value stagnates outside progress, it ‘rots.’ In our world, expecting progress is axiomatic—not good or bad, just fact. Stagnation must be part of theory, not excluded.”

“Progress demands separate study,” Unkno said. “A value’s value grows if it increases with surprise elements. ‘Surprises’ are part of progress. Expectations are always pre-built into economic reality—always. Seen in today’s stock market manners—and universal.”

“Indeed, an idle mind is the devil’s workshop. Another factor,” Cernus said. “Every action must include a measurable ‘interest’ parameter. Without interest, socio-economic interaction is nearly meaningless. Curiosity is part of economic tissue. Thus, the more regulation a sector has, the less interest it holds for the public—and the lower its value.”

“Hence decentralization is essential. Many options must exist!”

“Option breadth can be harmful too,” Cernus countered. “Each interaction has an optimal number of choices. Fewer is worse; more is also worse. This applies not just to assortment, but competition and product complexity.”

“Partly agreed,” Unkno said. “Breadth itself isn’t the problem—it’s when it goes too far. Market value drops if marginals exist. The entire off-road vehicle market suffers from one cyberpunk monstrosity.”

“Yes… Marginals ruin life. Value drops if consumers can ‘hit rock bottom.’ Social media exemplifies this: everyone suffers as it becomes addictive—even operators.”

“This problem is broader. Goods affecting the inner world are more dangerous and ultimately less valuable than those interacting with the outer.”

“But everyone endures!” Cernus exclaimed.

“Hence I note: tolerance for quality has grown remarkably elastic. People endure not just bad things, but monstrously bad ones. This doesn’t mean good goods don’t exist—they do. Nor that everything was good before.”

“Everything was always bad. We just didn’t know. IQ tests, for example, select obedient functionaries, not breakthrough-makers. It measures only extremely low abilities—correlation with success nears zero in the upper range. Crucially, tests correlate with negative productivity (inability), not positive (exceptional results). Same in quality assessment: it’s not one vector—from bad to good—but at least two. There’s also ‘I’ll consume it; worst case, it won’t get worse.’ This fundamentally negative perception competes with the traditional one.”

“Yes, we’re conditioned to see value as strictly positive. I had no bread—now I do. At least it’s something. But negative bread can now exist. We’ll study that separately. Now it’s vital: we can’t ignore that good goods and services are displaced by AI products—despite their obviously poor quality. This includes software code. Software quality monotonically degrades. Companies, even giants, don’t just ignore bugs—they often can’t fix old products. No one remains who can. The original experts died or retired. We all exploit the legacy of a ‘former high civilization,’ cobbling patchwork floors atop it for compatibility.”

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After a pause—not caused by the exertion of climbing uphill nor by the need to watch the uneven road—Rr. Unkno spoke with exceptional wariness:

“I’m almost afraid to ask, Doctor: what was the source of your inspiration? What led you to conceive of transactions as triadic?”

Cernus and Unkno couldn’t see each other’s faces, and this lent their dialogue an extra layer of meta-meaning. The very act of guessing—*“What does his face look like right now?”*—introduced a third participant into the exchange, transforming it into a kind of *triologue*. It’s reasonable to assume Dr. Cernus sensed the unease in the ritter’s remark—but he replied with unclouded cheerfulness:

“The idea struck me when I came across an old photograph—or perhaps even a daguerreotype. Unfortunately, I don’t recall the photographer’s name or any provenance details, so I’ve no idea how to find that image again. It showed Fishhook Landers (poor labourers) wearing tall top hats, waistcoats, and other sartorial items unmistakably belonging to the upper class—previously ruined, discarded, and then thoroughly worn down by their new owners. A curious, fleeting fashion. Those ragged fellows dressed in aristocratic garb, their faces dead serious, embodied for me, at that moment, the notion of ochlocratization. Over the past couple of decades, humanity has ‘democratised’ countless institutions—journalism, for instance. And I wondered, looking at those grime-streaked faces beneath top hats: what if we were to democratise *transactions* of the sort where a bank issues a major loan as part of the monetary emission process? Bankers assess the risk of an enterprise and the applicant’s reputation—then conjure money out of thin air for them. What if *every* transaction carried within it similar elements of risk and reputation? What if the emission process were technically embedded in each transaction? The more I thought about it, the less absurd it seemed. After all, most purchases today already come bundled with a kind of ‘reputation emission’—those star ratings on marketplaces. But those stars lack proper algebraic computability and freedom from monopoly control. Risk assessment, too, is inherently tied to purchases—but only in sectors where it’s absolutely indispensable, as they say. In reality, though, risk tolerance shifts within *every single transaction*. Literally every one. Simply because, for example, after a purchase the buyer has less money—and thus, by definition, becomes more financially vulnerable.”

“And has the democratisation of journalism,” Unkno asked, “led us to what we’d hoped for?”

"Certainly not. I don't have—and couldn't possibly have—an answer to 'How should it have been done?' My aim isn't to propose 'laws' in formulaic form, but to lay groundwork for operating as a kind of economic synoptic: an economist, using stable operator terminology within a suitable algebra, would guide AI-driven agents to gather and analyse data for optimising reproduction circuits. The truth is, we can no longer count on coherent collaboration among specialists from different countries. The world is fragmenting—and in places, collapsing outright."

Rr. Unkno gave a dry chuckle at this.

"Our 'bicycle-limousine,' I'd say, is rather too gentle a metaphor for the forced, severely constrained interdependence we now endure—one that's become more a source of awkwardness than cooperation."

"I'll go further," Dr. Cernus agreed. "This tandem expresses my grief over the present absence of moderate modernists like those who worked in Rabbitland 130 years ago."

"Indeed. Back then, actual adults still walked the earth. You and I aren't just talking face to face—we're doing so without even seeing each other's faces and eyes, and there's no adult in the room at all. It's a festival of disobedience."

"Rr. Unkno," said Dr. Cernus, "the 'adult' representative of the old Western order hasn't merely left the stage. A defining feature of the current crisis is this: the one who triggered it didn't just step aside—he died, leaving no heir to inherit his power, wisdom, or even the cunning needed to lead himself—and us—out of this chaos."

"That's precisely why I grew frightened," Unkno confessed, "by my own suspicion that you're being guided by our old fascination with ternary logic—a fascination that might lead us astray. It occurred to me: what if you've extended it into domains where 'three' isn't even a 'Trinity,' but a mere 'triad'? I haven't forgotten your grand linguistic exercises. The language you constructed—with its three mandatory components per utterance—hasn't just lingered in my memory. I admit: I still think in it. When I'm alone in a room, of course. I still remember your very first words: "Every utterance by every individual—each and every one of your statements—must stand on at least three legs. First: the message itself—what you wish to convey. For example: 'The chalkboard eraser is

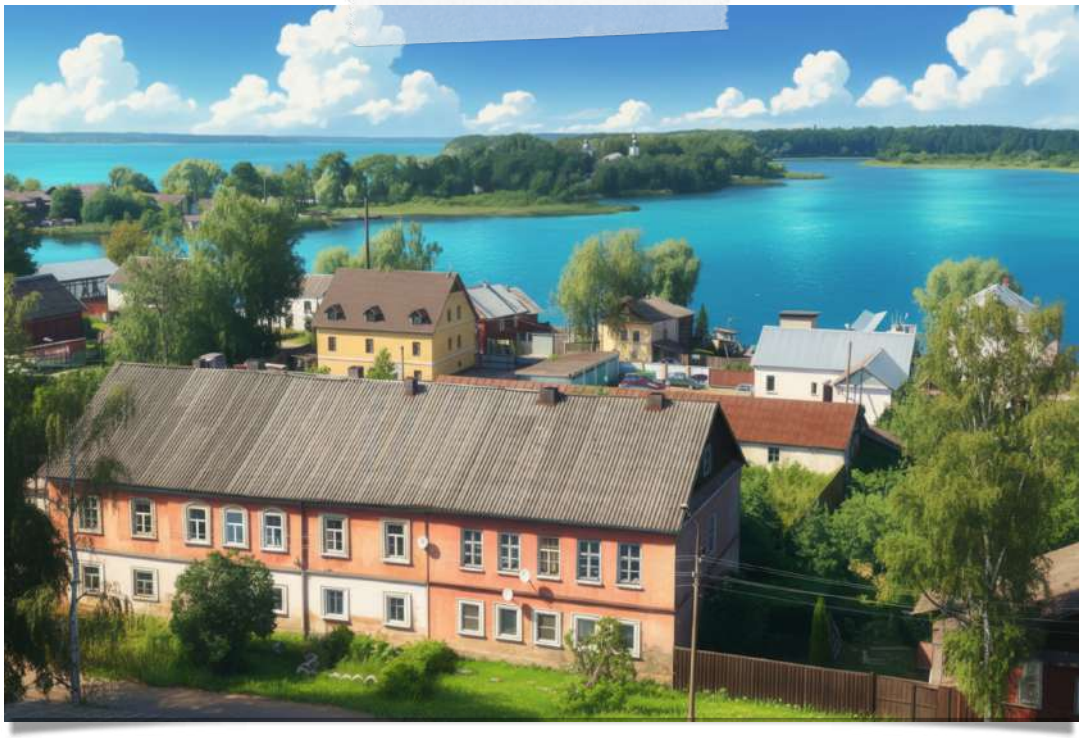
wet.' Second: your intention—why you're saying it. What's in it for you, specifically? For instance: 'I want to wipe the board clean.' Third: you must indicate how seriously you mean it. For example: 'Out of "soaked," "wet," "damp," "moist," "clammy," or "slightly damp," I choose "wet." And out of "I'm considering it," "Why not do it?", "If it works out," "I'll definitely do it," or "I'll do it no matter what," I choose "If it works out."' Why can't we do without this personal assessment—this explicit degree of seriousness? Because only this establishes a frame of reference. Your interlocutor must be able to tune into your frequency. He shouldn't have to guess which context you're operating in…"

"That's wonderful," Dr. Cernus beamed with an invisible smile. "And there's no cause for concern. Three is merely a sacred number—the number of dimensions in our space. As for my old lingua: truly, one cannot grasp the meaning of an utterance without knowing both the speaker's intention and their personal assessment of its plausibility."

"We're broken, Doctor! The rear bottom bracket is done. Where are we?"

"In Astaskovoh."

¶



5. Transaction Reflexes

Chapter Five, in which Dr. Cernus, riding from Astaskovoh to Swapuseh and emboldened by Rr. Unkno's interest, continues persuading him of the coherence of his new transactional fabric.

The breakdown granted the colleagues an extra night's rest—but disqualified them from the main standings of the bicycle race. Neither Dr. Cernus nor Rr. Unkno was disturbed by this.

"What was yesterday," Cernus sighed wearily, "was… Risk and reputation are noble notions, sure. But if there's no concrete benefit behind them, nobody'll lift a finger. Value is a multifaceted thing—like an old-school for-vodka glass. We talked about decentralized reputation systems, intellectual enclaves… The point is, you don't measure in units—you measure in changes. Choice is complicated. AI is lousy. The West has rotted. In short, we mostly just whined."

"Forget it, Doctor," Unkno said. "We don't need those doodling digests. Just talk as we go. No stenographer, alas. Relax—well, rather, tense up. We're in a race, after all."

“Do you have reason to believe that those who’ve dropped out of the race are competing among themselves—and that there’ll be many of them?”

“None at all. But that’s no reason to slow down. I’m beginning to like your three-stranded transaction scheme, Doctor,” Ritter Unkno said amiably, pressing down on the pedals. “We could call them TT.”

“May I ask why?” Cernus tried not to appear overly flattered.

Ritter Unkno replied:

“The key is to understand that all economic science permitted to govern is fundamental idiocy.”

“All of it? Is that a metaphor?”

“Unfortunately, no. Every single economic institution that influences power operates with ‘equilibrium, balance, the scissors of supply and demand,’ and other such nonsense. Open any document from any agency, and you’ll inevitably stumble upon ‘balance,’ ‘equilibrium,’ or something of that sort—or the names of scholars whose theories rest on equilibrium. Always. And that’s a sure sign: such people must be driven out of places where decisions affecting human lives are made—ministries, central banks, economic councils in imperial chancelleries.”

“So there’s no equilibrium?”

“In principle, none. Not for a single second. We shouldn’t look for it—and certainly shouldn’t explain anything by it. Economics is synoptics—weather forecasting. Not just an analogy: nearly the same thing. Except that in economics, there’s no unified time, as there is in synoptics.”

“I don’t follow—what do you mean by time?” Cernus asked.

“Synoptics doesn’t explain where hurricanes—or even cyclones—come from. Sure, textbooks contain some physical formulations, but nobody relies on them. Everyone knows warm air rises and cold air sinks; that ocean currents carry water with different heat capacity than land—but no one would dream of using such high-level considerations to forecast the weather.”

"Well, yes—they use numerical models that simulate interactions among 'particles of the medium.'"

"Exactly—numerical models, trained on vast datasets processed through neural networks. The networks simply observe how weather changes across locations. Models don't theoretically calculate how a hill affects wind or how snow cover reflects sunlight. And in these numerical models, all 'particles' share a single physical time."

"Then what's the problem? Why not invite 'synopticians' into economic science and the Emperor's economic apparatus?"

"The snag is precisely the 'jagged time' effect in economics. In economics, there are actors who can act instantly—as if outside 'physical laws.' Within national economies sit idiotic vampires who, with a mere finger-snap, alter parameters of tectonic weight—and do so relying on somnambulistic 'theories' built on the myth of equilibrium. The 'synoptic approach' would work if economics weren't so heavily influenced by people with an 'earthquake' button under their fingertips. Some semi-literate figure sits at a central bank, taps a lever with her fingernail—and half a continent jerks upward a hundred meters. Does this affect global weather? Absolutely! Is it predictable? Of course not. Models gradually adapt to the landscape."

"Couldn't we adapt to such shifts too?"

"No! No firm produces goods because there's demand at a given price. It may believe demand exists—but it never truly knows. In reality, it's carried along by forces it doesn't control. The vast majority of firms fail at launch. Only those lucky enough to find a crevice in the landscape survive. Usually, firms first set a price that merely covers costs and greed, then—without a shadow of doubt—try to sell. If it doesn't work? They change things. One thing, then another, then a third. Everything, haphazardly. In the end, they almost always sell something other than what they planned—and certainly not in the way they planned."

"Do they change their product lineup?"

"If only it were that simple! Nearly every firm earns money not from what's advertised in its charter or 'mission' (God forgive us!). A company may be registered as a 'mutual fund' or 'broker,' yet in reality siphon margins from land al-

location in a neighboring region where it has ties to the governor. The real income that turns into villas for executives' families almost never stems from declared activities."

"So it's total corruption?"

"Not necessarily. A firm might sell a particular sensation of life, packaged in strange handbags or clothing. For most companies, the revenue source is the result of on-the-ground practical searching."

"I see. So how do we fire these 'earthquake lords'?"

"Fragment economies into many interdependent circuits—and strip even a 'temporary acting emperor' of the power to enact large-scale interventions. Especially anyone who loves shouting in ALL CAPS on social media."

"How do we do that?"

"Nothing needs to be done," said Rr. Unkno. "It's already happening—right before our eyes. Each mafia clan in power will soon find itself alone with its own contour, entirely managed by AI agents handling transactions and money. That's precisely why your model struck me as promising: it's aligned with the future we're inevitably sliding toward—not by choice, but by necessity."

"Yes, borders are multiplying and fragmenting," replied Dr. Cernus. "You've reminded me of a widespread misconception. People assume societies and states create borders, but in reality, it's the opposite: borders constitute societies. The causal relationship runs counter to what we usually suppose."

"Could you clarify, please?"

"Borders generate society. The key to understanding social structures lies in studying the mechanics of demarcation—the continuous act of drawing distinctions and managing flows. Today's borders are hybrid phenomena that no longer coincide with lines on a map. They're not static barriers but 'inflection points where flows change direction.' Borders exist not only between states but within them as well. There's fragmentation at play: portions of the population physically reside within a state's borders, yet are—partially, at least—extraterritorial. Remote workers or migrants, for example, are only partly residents. They

bear certain costs and pay some taxes—indirectly, say, through VAT—but often remain outside most conventional fiscal arrangements. Moreover, borders that a country erects domestically frequently extend onto foreign soil through companies, 'nonprofits', and other agents. And it's not just states that set borders; corporations do too. Apps or banks grant different rights to different users. And these corporate borders aren't always consequences of state-imposed laws or regulations…"

"That is clear." Unkno interrupted. "I understand borders can be physical, financial, cultural—even purely informational: censorship, bans on online apps or features based on whether the user is tied to a physical, financial, or cultural domain. This classification mirrors the types of war. Many experts now speak of 'hybrid warfare.' Hybrid simply means a mixture—and it's clearly definable: as a list of components and their proportions. A Black Hiperborian cocktail, for instance—five parts vodka, two of coffee liqueur, three ice cubes. Likewise here. Pure 'Ares-war' involves troops meeting face to face. 'Athena-war' is trade and finance: tariffs, currency interventions, sanctions, bribery, partner blackmail. 'Apollo-war' is cultural: you glorify your own way of life while vilifying others'. Hybrid warfare is a specific ratio of these three components. And the three border types are instruments for these three war types. They may look different depending on whether you're defending or attacking—but that still doesn't make borders society's creators. On the contrary, societies deploy borders to serve various interests. But why are borders primary? Why do borders create societies rather than the other way around?"

Dr. Cernus remarked:

"It's interesting—when your geopolitical rival organizes the dispatch of migrants into your country, that can be a hybrid war incorporating all three components. The cultural dimension obviously dominates; the financial one trails slightly behind, though its overall impact is less—but Western budgets are already straining under migrant-related costs. And there's even a combat component. But returning to the primacy of borders: first, you are correct, we should note that borders come in several types. There are weak, marker-style borders—like a white picket fence that won't stop a horse unless it's particularly eager to bolt. Such borders don't always enclose anyone in or out."

“So they merely divide zones on equal terms—a topological distinction from other borders?”

“Not quite. Strict topological definitions won’t help here. What matters is that they’re physically easy to breach.”

“I see. So such a border isn’t meant to defend against greed; fences aren’t built for protection per se but to identify those seriously intent on climbing—or even breaking through.”

“Exactly,” said Cernus. “But then there are strict borders—like fortress walls. They differ from weak borders not only in strength but also in logic: they usually shield something small from something vast—in effect, from the entire outside world. Corporate firewalls are precisely this type.”

“A voluntary prison, then?” asked Unkno.

“No, more like a fortress or fort. You’re right again, though—it does have an inverted twin: the ‘prison cell.’ There, the enclosed space is even smaller, and the border primarily blocks escape—though it also protects against intrusion. Witness protection, for example: witnesses first, criminals second. Passwords are kept in ‘prison cells.’”

“Gold bars,” added Unkno.

“And finally,” said Cernus, “perhaps the most prevalent type in our era: the checkpoint.”

“A checkpoint?” grumbled Rr. Unkno sourly.

“Precisely,” replied Cernus. “Border crossings, customs desks at airports, CAPTCHAs on websites, fingerprint scanners on smartphones, highway patrol stops. There are millions of checkpoints worldwide. They seem like mere segments of a border—topologically and functionally—but that’s no longer true. Checkpoints can exist independently. That’s why memes showing a doorframe standing alone in an empty field aren’t as absurd as they appear when you examine modern reality closely.”

Unkno fell silent for a moment.

“Still, Cernus, borders aren’t primary. They only emerge where flows already exist. No flow—no border. Flow is the original state: something moved freely first, and only later was it interrupted.”

“On the other hand,” countered Cernus, “a smart flow won’t go where a border already stands—at least, not without good reason. Therefore, studying economics means seeking junctions—places where flows change direction. The function of a border, even a subtype like a checkpoint, isn’t to halt movement but to split and redirect it. Some reflects back, some goes elsewhere than originally intended. Only a few pass exactly as planned—and even then, only because they approached the border knowing they’d slip through according to their own script.”

“Borders between media…” Unkno noted.

“Precisely,” affirmed Cernus. “There’s deep natural meaning in this. Take our favorite example: a light beam passing from air through a bottle’s glass into water—it refracts at the boundary. Why? Due to what? For what purpose? Let me use this idea again: we’ve two perspectives. The first is ‘from past to future’: photons travel with specific energy and momentum; interactions differ between media. It makes sense, but calculating refraction angles this way is cumbersome. The second approach is as if ‘from future to past’: we ask, ‘Which path is optimal? How to expend less energy—or, in cases other than light, less time?’ The lifeguard example illustrates this well. Do you know it, Rr. Unkno?”

“The one where a man runs along the beach while someone’s drowning—not straight ahead but off to the side? Yes: running straight into the water is foolish—too much swimming. Better to sprint along the sand first—it’s faster—then swim at an angle, not perpendicularly.”

“Exactly. The path refracts naturally due to the boundary between media. If water access were limited to specific entry points, he’d head straight for such a checkpoint. Humans navigate via borders. Ruled by efficiency—or ‘laziness.’ Nature shares this ‘laziness’ too: it never rushes, yet always chooses the path of least resistance. *All economics is the play of ‘laziness’ at boundary crossings.* Fences, markers, checkpoints—they’re constantly applied to flows of money, goods, people, especially information.”

“Even to information not yet digitized,” grumbled Unkno. “Faces, gaits—everything gets recorded.”

“It does. Thus, when you cross borders, you ‘lazily’ minimize effort—and do so as skillfully as you can to conserve energy. This description explains economics more accurately than profit-chasing or need-fulfillment.”

“But couldn’t we just analyze each agent’s intentions—like photons in a beam?”

“We could. But it’s tedious. Profit-chasing is also a representational method, yet it grows increasingly outdated and overly crude each year.”

“Why’s that?” asked Rr. Unkno.

“Omnivorism.”

“Don’t go on,” Unkno grimaced.

“So here’s the conclusion,” said Cernus. “Economics must study borders—their types, structure, behavior. And since the most common border is the transaction—a checkpoint—economics reduces to the study of transactions. A whole ocean of meaning lies within them, if you pay close attention.”

“Now I grasp your point,” Unkno drawled. “We’ll study ‘boundary junctions’—critical moments of flow redirection.”

“Yes. Precisely there do cities, states, and districts materially emerge. ‘Circulations’—complex patterns born from connecting many junctions—form curved, sometimes self-enclosed trajectories that constitute social systems. This is how people, goods, money—and reputation, risk, even intentions—move. These aren’t metaphors but direct descriptions of what actually occurs. We must also account for what’s new: contemporary borders incorporate biometrics and drones. Both corporations and states have become entities that perpetually ‘observe’—ever more insistently, not just via cameras but by tracking transfers, messaging apps. All of it constitutes checkpoints.”

“‘Surveillance capitalism’ is rapidly becoming ‘algorithmic,’” noted Unkno. “AI! And a person’s status, capabilities—even identity—are now shaped by invisible borders within digital architecture.”

Cernus agreed:

“Before borders existed, everything—matter, information, being—was natural. Power isn't merely violence. It’s domination through creating junctions: checkpoints and regulated transactions that stabilize some flows and disrupt others. A city wall isn’t just defense—it’s a political act redirecting flows of people, goods, ideas. A zone of circulation emerges—the city center—and other flows get pushed outward. A bureaucratic checkpoint is also a junction: it decides who to admit and routes them by rule. It may seem as though erecting such a barrier is a passive act. In reality, it’s active—even creative.”

“Don’t exaggerate,” cautioned Unkno.

“Borders make power kinetic,” continued Cernus. “Power doesn’t possess statically; possession itself is perpetually in motion. Borders and junctions aren’t obstacles—they’re instruments through which movement takes social form. Political struggle consists of breaking old junctions, building new ones, and rerouting flows—along with power itself. Again: It’s not society that creates borders—borders create society!”

“Fair enough,” conceded Unkno. “Then our research must examine not only borders themselves but also *resistance* to them. We’ve grasped ‘laziness’—it’s timeless, present even in natural boundaries. But resistance is different: it varies greatly in response to natural versus artificial borders. We must closely observe how radicals resist, undermine, circumvent borders—thereby ‘rewriting’ flows. This matters equally for financial radicals, cultural interventionists, and especially those physically crossing borders. Without this lens, we’ll understand neither economic structure nor the foundations of power.”

“We’ll follow a principle widespread in nature,” said Cernus: “‘As above, so below.’ Complex structures often exhibit fractal patterns—systems repeating themselves across scales. A company resembles a trust, which resembles a directorate, which resembles a ministry, which resembles a state, which resembles a reproductive contour.”

“Ah yes,” Unkno drawled. “The coming fragmentation will increase both the number of levels within a single contour and the total count of reproductive contours worldwide—that infamous deglobalization.”

“True, but the core methodology remains intact: we’ll practice economic synoptics amid sudden tectonic shifts. We’ll examine small systems—like a firm or a village with primarily subsistence farming—as well as the largest systems: Empires interacting with suppliers, both as adversaries supplying goods and as purchasers of resources, not to mention aggressors in trade and cultural-political wars.”

“Indeed,” remarked Rr. Unkno. “We’ll need to devote considerable time to describing intermediate-scale systems.”

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On the next descent, ritter Unkno proposed:

“But enough complaining. Let’s talk today about the ‘atom’ of your new transactional fabric. I want to understand it thoroughly. What happens in the simplest case?”

“You mean an elementary transaction?” Cernus responded.

“Yes. The most trivial one.”

“Then let’s start with how a conventional transaction is usually understood. Even at this level, there’s no accepted standard—only widespread misconceptions. I fear you suffer from them too.”

“I don’t mind. Let’s take something primitive: you hand me goods, I give you money. What could be simpler?”

“Fine,” Cernus agreed. “But let’s be precise. In reality, you receive two items: a stack of cash and a receipt signed by me. I receive cargo and a ‘settled’ invoice. So I, too, get two things: a pallet and a document stating you requested payment per the waybill, I paid, and you confirmed it with your signature. The deal is recorded; payment is complete. No complaints should arise. Let’s not complicate things with delays, insurance, or warranties—though in real life, these are almost always present.”

“Excellent. We exchanged two pairs of items. What next?”

Cernus paused for emphasis.

"The trouble is this: before, during, and after the deal, something critically important never happened. The system missed something essential. So let's set this example aside and take another. We'll return to it later…"

"Right—armed with renewed understanding," ritter Unkno grumbled.

"Exactly. I've already confessed to you what inspired me. So here I go again: two parties—your enterprise and a bank. You present a business plan—a reasoned intent to create value, say, smelting a million tons of metal. The pitch succeeds; you're granted funds. The transaction is complete.

Let me reiterate: three flows were involved—money (monetary), the bank's trust in you (reputational), and its belief in your venture (risk assessment). To disburse those funds, the bank triggered monetary emission through the central bank. In effect, it created money. And that's normal: the money supply should align with the volume of goods produced. Of course, the money appeared five years early—with the risk that the metal might never materialize. Many condemn this practice as the root evil of modernity. I disagree. We simply don't have a better recipe yet."

"There *is* a recipe," Unkno said, "but I see that's not the point now. One need not collect taxes—money can be created as needed, restrained only by common sense and statistics. States already exceed 'printing' money solely for profitable projects. So—you're not proposing to create money in every atomic transaction? That's correct. In a simple 'buy-sell,' nothing is created."

Cernus shook his head.

"I must object: sometimes something *is* created, sometimes not. All transactions contribute to GDP. Two amiable businessmen negotiate, organize logistics, close a deal—that's also labor. It's no less necessary than smelting metal, which, upon closer inspection, may only be needed for the cars they drove to the meeting. Possibly—and I stress *possibly*—emission occurred. After all, our three-stranded transactions contain everything: money, reputation, risk."

“Let’s suppose,” said Unkno, “they’ve also created value. I don’t want to descend into demagoguery about gaming the system by simply shuttling money back and forth. I’ll just ask: who, and how, will decide how much new money to generate per transaction? And I understand—in most cases, the answer will be zero.”

“You’re fixating on the wrong zero, my dear ritter,” countered Cernus. “Far more important is that we routinely zero out things that shouldn’t be zeroed. Take, for instance, someone buying a house in a newly developing cottage estate. Suppose they’re the first—or among the first—buyers. Does the mere fact that they’ve bought the house, planted flowers in the yard, and now have their kids jumping on a trampoline help the developer sell the next units?”

“Of course,” replied Unkno. “The estate gains added reputation.”

“Assume this buyer isn’t the director of the local cemetery or some other public figure. Then where does this reputational boost come from? Did it just appear out of thin air?”

“No. It arises because the buyer assumed risk.”

“Exactly, dear ritter! Exactly. Two very real burdens. First—paying for electricity before gas lines are installed. And second—continuing to pay for electricity until gas finally arrives.”

“Ah, so that’s how you see it…”

“Yes. And nobody knows for certain when that gas will actually arrive. So, he’s taking a risk. In fact, there’s even a third component: the risk that the estate simply never ‘takes off.’”

“Well, yes,” said Unkno. “That’s precisely what I was referring to.”

“Does the developer compensate these early buyers with a discount for this contribution?” asked Dr. Cernus.

“Not always—far from it.”

“Is there ever a precise calculation determining exactly how much to value their reputational and risk-bearing contribution?” Cernus asked—and immediately answered himself: “Almost never! There’s simply no such methodology. My claim is straightforward: every transaction always comprises three inseparable components. In addition to the basic ‘goods for money’ exchange, each transaction also involves flows of reputational capital and risk tolerance.”

Rr. Unkno fell silent for a moment.

“Yes, Doctor. You may well be right. It just occurred to me—if someone buys a car, the reputational component alone might account for more than half the total price.”

“To determine the exact coefficients,” said Cernus, “we first need to technically enable money creation within transactions—and then run system-wide tests, including other innovations.”

“Wouldn’t it be simpler to add that capability later, once the core system’s built?”

“No,” Cernus firmly replied. “Not simpler at all. Imagine building a house. You install pipes in walls and floors for future bathrooms and kitchens. You don’t have a dog, so you don’t plan a paw-washing station in the foyer. But your son might convince you to get one. Isn’t it more foresighted to run water and drainage lines from the start? Your wife may later forbid surface-mounted pipes for aesthetic reasons.”

“More foresighted, indeed. So you believe this transaction design won’t cause side effects?”

“I don’t know,” Cernus admitted honestly. “The mechanism tempts one to print money from thin air—more, and without permission. But the prize is worth the effort.”

“On the other hand,” Unkno agreed, “there are already plenty of loans creating empty air. The principle matters more: let smart transactions account for everything potentially needed. That’s methodologically sound.”

⁂

“My hope—similar to yours—is that things won’t worsen. Currently, businesses take loans promising to complete projects, with only reputation as collateral. In small transactions, reputation will be calculated differently. Today, only major borrowers are vetted—and poorly. Second, risk management uses elaborate schemes, even structured products. Crucially, the new elementary transaction—the three-stranded atom—introduces nothing fundamentally new. Everything already exists, just at a coarser granularity. Less fluid embodiment. I don’t claim every deal—or even meeting—can generate money—though I confess I think it can. My goal is to show money must be more than money: fundamentally intelligent and social. Money must be smart. Money must be…”

“…shared!” Rr. Unkno laughed.

“‘Social’ doesn’t necessarily mean ‘shared,’” Cernus said, slightly flustered. “Not even necessarily ‘shared’ in the modern sense of ‘shared.’ Though a network will exist, of course.”

“I meant another allusion, Doctor. Our classics wrote a century ago: ‘Consciousness, by its very nature, is social.’”

“How so?”

“Their reasoning was lengthy. I wouldn’t digress, but it suddenly struck me as highly relevant. Look,” Unkno began.

“Organisms respond to stimuli with cascades of reflexes. Offer a dog meat—saliva flows, it swallows, gastric juice forms. I imagine a smart-transaction node reacts to payment similarly, issuing a dispatch authorization. But if the food is offered by a territory violator, a competing cascade activates. Which prevails depends on a trifle—the straw that breaks the camel’s back. Different stimuli race toward the ‘gates of final decision’ over heads; many reflexes perish under the crowd’s feet. The coordination of conflicting reflexes *is* consciousness! An intelligent system has it. Humans do. Dogs don’t. Your smart transactions certainly do. In reflex struggles, ‘sixth sense’—self-awareness—plays a key role. Humans report to themselves—in the form of experience, reflection. Words are simultaneously reflexes and stimuli…”

“Exactly!” Cernus said. “If every distributed ledger node spent its energy not on meaningless mining but on solving tasks for a composite neural network ‘living’ on users’ devices, everyone would gain fair access to collective intelligence—proportional to wealth and reputation, inversely proportional to risk-taking and chaos.”

“Something like that,” Unkno said, not distracted.

“Associations along transactions—hypergraphs, as we’ve established—are incomplete. Like human thoughts: not all are spoken. The most crucial associations, emerging during reflex coordination, are undoubtedly pondered but unvoiced. The unspoken still manifests in system behavior—despite its hidden nature. Crucially, one cannot simply ask the system about its state—the query triggers a new cascade of reflexes and associations, including hidden ones. Even at great expense, therapy on a cozy sofa often fails to reveal the truth. Interrogation in a prison cell may succeed—but only by shattering the very system it probes. That’s the situation regulators will face in your transaction network.”

“So why is consciousness social?” Cernus asked.

“Because action is primary. Consciousness doesn’t precede action. Being determines consciousness. I don’t know if this holds for humans, but your transactions must behave this way. I dislike philosophies where consciousness exists only in me, and everyone else—including you, Doctor—is a phantom or zombie.”

“‘I become aware of myself only by becoming aware of myself as another’?”

“Yes, yes. My self-awareness is possible only because I relate to myself as to another. First, I perceive others’ speech—only then learn to think about myself. We perceive our own speech as alien—and thus consciousness arises exclusively as a networked phenomenon. We don’t start speaking until we’ve absorbed millions of words and terabytes of sound.”

⁂

“So, Doctor, the main concern: regulators will find themselves in a difficult position. How do we address this?” Rr. Unkno asked.

“We’ll hide behind elephants and whales. The AI oligarchs will strive to appear less threatening—as numerous independent enterprises.”

Cernus explained:

“They have a new technical foundation. AI agents and smart contracts nest within individual programmable legal entities. Such entities can already be registered on the Very Mediterranean Island. Like delivery drones, they enable alternative connections. Algorithmically generated ‘swarms’ of legal constructs adapt to operations. Regulators maintain strategic oversight—or the illusion of it. The lobbying narrative: this enhances flexibility and reduces burden on supervisory bodies. Allegedly, programmable structures help adapt to a changing landscape.”

“Who pushed for such laws, and why?” Unkno asked. “I haven’t heard AI oligarchs allocating budgets for lawmaking in that region yet.”

“The legislation responded to the old crypto boom—to attract startups to the island. Programmable legal entities emerged as a side effect. Practice isn’t mature yet. But advantages are potentially accessible at reasonable cost by reducing misunderstanding between government and business. Traditional legal entities are bulky and expensive. Programmable ones are standardized, modular, economical, and form complex structures with predictable quality.”

“Understood. Nothing surprising here,” Unkno said. “Smart contracts also didn’t appear in isolation—they were built atop cryptocurrencies. And cryptocurrencies were a logical step in the tectonic process of money ‘debasement.’ So programmable legal entities fit a stable trend. What about regulatory reporting?”

“Given the enormous role the new system assigns to business ‘psyche’—the hidden reflex ensemble—it would be suicidal for regulators to abandon indirect truth-seeking through reflections in other systems. Demanding reports is sometimes meaningless. In such a system, a firm’s report can never be an act of neutral self-observation. Preparing the report alters the legal entity’s state. Self-observation can’t be trusted!”

“What then—tempt and sear the firm with hot irons?”

"No—the firm must be *attempted*. The test subject doesn't become an observer; it doesn't help reveal hidden reflexes. It remains an experimental object—but the experiment itself is distorted by questioning. Each new query triggers a new reflex, and judgment is based on that. The entire experience passes through a double lens."

"Understood. Draw out and bring up. Probe and groom," Unkno mused. "But the material, Cernus—the material… They need decent input for that nurturing. Take a single transaction, for instance, at some sort of 'checkpoint'—what exactly are you feeding the neural net, and what are you showing the authorities?"

Unkno fell silent as they approached a long, steep ascent looming ominously ahead. Just then, a young woman on an electric scooter caught up with them. She halted, stepped onto the ground, unclipped a rigid tow hitch from her frame, pointed to it, and offered:

"Need a lift?" she said—with an accent. "I'm Angelina."

"Absolutely!" Unkno agreed at once. "We're out of scoring range anyway."

Cernus shook his head doubtfully but chose not to voice an objection.

Angelina's scooter pulled their bicycle train steadily, if not quickly. Both men relaxed in their saddles. Dr. Cernus resumed:

"Every transaction contains parameters you cannot change—like the agreed-upon monetary amount. These figures propagate along the chain. But there are other parameters you must adjust—to optimize the flow across the supply chain."

"You're either being deliberately obscure or you haven't quite grasped it yourself," Unkno grumbled. "It's far simpler: every transaction participant—every economic actor—comes equipped with just three basic data points: [1] amount ('what's the price tag?'); [2] expected reputation increment; [3] expected risk tolerance change. Three components. That's it. Naturally, this is just a vector in three-dimensional space… TES—blimey, I mean S. E. T. Right? A vector is the most natural representation of such a quantity."

“Well, of course,” the doctor confirmed. “Three components—that’s a vector, plain and simple.”

“And you’re surely working in Clifford geometric algebra, then?” Unkno asked, already convinced of the answer. “A transaction is an operator.”

“Naturally—geometric algebra, I use the approach inspired by one of its pioneers, physicist David Hestenes. A transaction is a set of operators: rotors or spinors. The architecture can vary.”

“Exactly. In every transaction, you know precisely how much the monetary component will shift—some $\triangle m$. In an ordinary situation, like right now, that’s all there is to the transaction. On one side, an actor with $\triangle m$; on the other, a counterparty with ‘minus delta m’. Done. The two components cancel out—zero net change. Everyone’s happy. Story over. So your monetary dimension is degenerate. How’s that possible?”

“Well—it isn’t,” Cernus countered. “We do apply a simple ‘addition’ operation to increments. That’s the only operator with physical meaning during direct counterparty contact—when the transaction, as an entity, doesn’t yet exist. When there’s no external force, will, or rule intervening in the ‘settling of accounts,’ it’s just ‘you and me.’ But the monetary dimension isn’t degenerate at all. Imagine this: you rent an apartment while traveling…”

“In deals like that,” Unkno interrupted, “reputation is always added nowadays. Platforms assign ‘stars’ based on mutual reviews.”

“And risk, too. All three components always emerge—and they immediately warp the monetary component, albeit indirectly. Reputation shifts in two ways: independently and dependently. When landlord and tenant complete a deal, each rates the other. Both gain reputational capital. Crucially, it grows even if no rating is left or if the public score doesn’t visibly change. Simply expanding the platform’s data or experience base has intrinsic value. Reputation exists on platforms—but incompletely. It remains in the silo. You can’t transparently convert it into an instant discount…”

“By the way,” Unkno cut in again, “how do you measure reputation in the same units as the goods themselves?”

“You’ll see. A family vacationed abroad—spent a month along the Mediterranean coast, drove a car, booked apartments through a platform, steadily building their rating. Then they took a ferry to another coast and rented a cottage in some northern backwater—right under an ancient Roman aqueduct. They picked it based on descriptions and photos. The photos looked lovely. Reality? Freezing at night, heating provided only by a tiny, smoky iron stove. They suffered. Woke up five times a night to stoke the fire—or else you’d freeze with the window cracked open; shut it, and you’d get poisoned. CO gas! Children are there! Fuel cost a fortune—only sold at some fancy supermarket nearby. There’s your shift in the monetary component: unforeseen but unavoidable expenses. As you know, the reputation model works like this: both sides submit ratings, but each only sees the other’s after both have submitted their ‘stars.’ Despite the discomfort, the family decided not to tarnish the owner’s ‘karma’ for the drafty cottage—partly due to cultural differences, and partly because every Mediterranean host had given them top marks. They figured, ‘That’s just how it’s done here—don’t screw over your fellow traveler.’ But no: the cottage owner gave them the lowest possible rating—allegedly for sawdust and wood chips left behind, claiming he had to pay for cleanup. There’s your monetary component again. Unfair? Who knows—from one side’s perspective, it’s deeply unjust. Had the complaint been about something else, not those blasted logs, the tenants might have let it slide. But such brazenness demanded action—they filed a formal complaint through the platform and triggered fairness-resolution mechanisms. And that, again, costs resources.”

“Yes, instructive indeed,” Unkno conceded. “It turns out the transaction’s participants aren’t just landlord and tenant—but also the platform itself—and, indirectly, a whole crowd of cheerful coastal hosts who weren’t even involved.”

“Precisely! So what do we end up with? Resultant value vectors: $\triangle m + \triangle r + \triangle t$—where $\triangle r$ is ‘delta reputation’ and $\triangle t$ is ‘delta risk tolerance.’”

“And where’s the risk in all this?” asked Rr. Unkno. Angelina braked clumsily, nearly toppling the whole contraption—but they managed to steady it.

“How can you ask? What if the kids caught a chill overnight and fell ill? The emergency fund got wiped out. The possibilities are endless.”

“But these are subjective valuations, aren’t they?”

“Of course. What else could they be? Parties always perceive the same situation differently. The transaction operator doesn’t force terms to equalize—its job is to identify the optimal parameter set that could achieve balance.”

“Understood. If you sum the participants’ vectors, you won’t get zero. Someone still owes someone something—in some sense,” Unkno agreed.

“In other words—emission has occurred! A materially real entity has arisen ‘from thin air.’ A plus for one, a minus for another. Crucially: it didn’t exist before the transaction; after, it’s there—and persists, even though the transaction itself is over. Hence—no settlement! Settlement is only possible later, once you run calculations and find the optimal path across the entire supply chain…”

“More like a ‘supply thicket.’ One trip accumulates a hundred indirectly linked actors.”

“A million, even,” Cernus retorted eagerly. “Neural nets couldn’t care less.”

“And in future periods, you propose relying on what the neural net outputs?”

“We started this conversation with what to show regulators. This output would do perfectly.”

“So the regulator will punish that wretched owner with the leaky stove?”

“Maybe. What’s it to us?”

“Fair point,” Unkno conceded.

“A three-stranded transaction registers difference. It doesn’t need to intervene immediately through an operator. In the space of ‘money, reputation, risk,’ only economic actors operate—real people, bots, vending machines, delivery robots. The key is—they’re all participants in economic interactions.”

“One question arises: does the operator apply geometric multiplication?”

“Vectors generate bivectors and trivectors…”

“And, in general, k-vectors,” Unkno nodded. “No one’s limited to just three components.”

“The fundamental transformation is reflection. A transaction operator is made of mirrors.” Cernus twisted his head a full 130 degrees and winked at Unkno with his left eye, nodding toward the silent Angelina piloting the bike-train up front.

Rr. Unkno raised his eyebrows knowingly and launched into full rhetorical flourish:

“It’s handy to think of it as a room—a smart contract. Two people enter. An ‘atmosphere’ prevails. Let’s add imagery: yellow lamps are on, rendering everything in extreme contrast—like those in science museums. Plus ultraviolet light: you can see security marks on the money. Inside, the rules are different.”

The doctor added:

“But the transfer of sums and goods—or rather, the documents representing them—happens strictly hand to hand. We’re talking decentralized transactions. You can introduce ‘centralization’—say, for regulatory monitoring—but the reverse is impossible: you can’t liberate a shackled transaction and make it independent.”

“So we treat the transferred objects as verbs, not nouns?” Unkno asked.

“Yes. A number might simply be ‘ten units of currency’—or it might be the operator ‘multiply by ten.’ We’re used to explicitly writing the multiplication sign. But sometimes you can’t—or shouldn’t. Triviality obscures this at first glance. Take something more complex: the imaginary unit i. It’s not just $\sqrt{-1}$. It’s the operator ‘rotate by 90 degrees.’ Multiply again, and your object rotates 180 degrees. Hence $i^2 = -1$. The face now points where the back of the head once did. This approach transforms computation from description into action.”

Just then, Angelina stopped, detached the tow line, waved, and vanished. The two colleagues waved back and rode on—and after cresting the first hill, spotted the destination checkpoint’s flags in the distance.

“Look at that, Cernus—how quickly we arrived!”

The tandem halted at the checkpoint. Unkno glanced around and sighed:

“Oh, right… this was only part of the stage. Probably the most godforsaken spot of the lot. Who designed these path segments? Our carriage yesterday knew just when to break down—that’s where the boundary should’ve been. When I get back, I’ll write a strongly worded, well-reasoned complaint to the powers that be.”

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6. The Human as a Network Node

Chapter Six, in which, en route to Old Roossah, the colleagues discuss the properties of three-stranded transactions.

The weather was splendid. The narrow cycle path gleamed—a fresh, reddish asphalt ribbon as if just printed moments ago.

“Once more about the powers that be, Cernus,” Unkno said. “Tell me, how will those politely called ‘key players’ react to your virus—the three-stranded transaction? Not just regulators, but the AI oligarchy and traditional financiers. Who among them would welcome such dreadful uncertainty?”

“The AI oligarchy will temporarily side with us,” Cernus replied. “It will exploit the situation to hide in those conveniently grown thickets everywhere. They don’t need to appease authorities—they need only lower vigilance against themselves, even briefly. At first, they won’t see a competitor in this mesh network.”

"*At first* what?" Rr. Unkno didn't follow.

"More precisely: until the moment of institutionalization. Let me illustrate with Bitcoin and cryptocurrencies. It took about fifteen years and unfolded like this:

'Before Bitcoin, business dealt with three institutions. First: payment systems—bank transfers, cards, checks, e-money. Second: money itself—issuance, exchange rates, intrinsic value—all tied to the state. Third: savings and accumulation, dominated by the private sector, with the state acting as insurer and supervisor, especially intrusive in pension matters.

Bitcoin initially proposed a world with no institutions at all. It was simultaneously a payment system, money, and a savings instrument. Even custody—the vault function—it handled itself, as long as every network node was equal. Almost immediately, the payment function split off: "light" wallets emerged. People could transact without participating in the network or contributing computing power. Then institutions seized control of issuance: mining and network participation became separate activities requiring different hardware. The second function vanished. Next, custody was corrupted: people stopped holding bitcoins themselves, handing them to third parties (custodial wallets). Only contractual obligations with providers remained. It seemed over! Institutions had reclaimed control; the public was left holding nothing. But even that wasn't enough. They captured the very idea of the distributed ledger. Corporate blockchains emerged—a conceptual absurdity, an oxymoron. In the end, even memory of that brief revolution faded. The reaction caught everyone. And to ensure nothing stirred again, everything—institutions and coins alike—was concentrated back into the hands of the old elite against whom the revolution had begun. Bitcoin is dead. The memory of it is dead. The idea itself is dead—and beyond resurrection…'"

"You overstate the old elite's role," the ritter said. "Who cloned Bitcoin? Bitcoiners and crypto-anarchists themselves."

"Yes—the first stage was always the work of fools and traitors from within the revolutionary camp," Cernus replied. "That happens in every revolution. But allow me to continue:

‘Why did this happen? Look to history. You can’t jump from feudalism to capitalism just by decreeing it. From centuries’ distance, we draw it that way, but in reality, it began with the legalization of interest on loans. Even Protestantism was secondary. The Reformation was a response to an already-articulated demand for religious leniency. What mattered wasn’t what happened in the Vatican, but how those fat spiders from Rome harassed the small yet active provincial individual.

In this analogy, Bitcoin failed because it aimed at all power at once. By the 2010s, power had already shrunk—it rested almost exclusively on finance. Military force had weakened. Police had always operated haphazardly—you saw it in post-hurricane cities. Moral authority had long rotted—hard to recall when. Religion was gone. Propaganda had already lost television and print but hadn’t yet fully weaponized synthetic social media. And Bitcoin aimed straight at this last bastion—finance—without preparation, without ideological groundwork, without user education. Only a few understood it. You can’t offer radical change to an unprepared audience. It’s wasted effort.’

“Then find the equivalent of that historical legalization of usury,” Unkno snapped irritably. “I fear this: Bitcoin supposedly returned money’s function to God, after centuries of it being in the sweaty hands of sinful men—especially the worst among them. AI will attempt something similar. The AI oligarchs will face a problem: their agents will err, inject chaos. AI surgeons will excise the wrong tissue. Science will drown in delirium. This may be surmountable, but temporarily, the industry will teeter on financial and moral bankruptcy. Then the AI oligarchy will go all-in—attempting to seize money’s function, just as those who once commandeered the printing press did (not out of malice, but from knowing otherwise they’d be bankrupts and hanged men). Even now, AI oligarchs delay their disgrace—but they can’t abolish it.”

“Your fears aren’t unfounded,” Cernus conceded. “We need an organic, decentralized network—but corporate imitations will arise, akin to ‘corporate blockchains.’ They’ll pour empty water into the system: valueless tokens, unbacked vouchers—to lure the public. The result will be a river with whirlpools and rapids. An inevitable evil.”

“I distrust talk of decentralization,” Unkno admitted. “I can’t pinpoint why, but I sense a trap. Take Bitcoin: would it have benefited anyone had it remained

pure? Some wise, respected crypto-pioneers—later found floating belly-up far from any beach—claimed in life: 'If Bitcoin replaces the reserve currency, it will create the darkest feudalism.'"

"The root evil isn't decentralization," Cernus said. "The problem was that money's institution is sacred. Bitcoin barged through bolted gates. And now, we shouldn't create 'new money.' More precisely: we mustn't fill the new TT network with a primary payment instrument. Let's launch a secondary circuit. 'Test it on cats'. When the thinking network 'rises,' it will decide its own nature—perhaps as a form of money. It will understand its own capacity."

"Cats?" Unkno pondered. "You're asking: 'What resembles money but isn't money?' Answer: monetary surrogates. But most jurisdictions preemptively ban them. True, when the reserve currency collapses—a matter of years—surrogates will sprout like mushrooms. Yet we'd prefer to operate legally now. I hope you have such a recipe. We must use for initial tests something technically resonant with the system—yet unfamiliar, even alien, to the ordinary world."

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"The unfamiliar," Cernus said, "often hides in the most natural. All novelty is old truth rediscovered. Recently, you aptly analogized the three strands: trader partner (commerce, monetary), comrade (like-minded, reputation), ally (battle-brother, risk). Every business relationship contains all three components. When you do business with someone, there are monetary, 'combat,' and ideological ties. Who's your co-shareholder? A battle-brother! With him, you share risk, go into battle. Business isn't just income—it's a superb way to end up at rock bottom, socially ruined. Whom do you grant options as a valued partner? The like-minded—not the battle-brother. A battle-brother would resent options. And whom do you engage purely monetarily? Your co-worker—a joint 'laborer.' You're merely business partners (many legal entities are literally named 'partnerships'). You're bound not by money alone, but by commodity-money relations. And in that pair, the commodity reigns. Money matters most where it's withdrawn from business to hide. Purely monetary ties are business's enemies. A bank isn't business's friend—it's an overseer. In today's world, simply an enemy."

"Indeed," Unkno agreed. "In the Western Empire, the financial sector claims up to 70% of all income, versus a reasonable 5–7%. And I agree: the reputation

strand flows along a spiritual line. In a primitive sense, yes, but spiritual. Honor travels that path. And risk isn't just fear of bankruptcy—it's shared responsibility. Joint accountability. Which implies you remember your misdeeds."

"Precisely here lies the unfamiliar that is, in truth, ancient as the world," Cernus said. "We speak of trivial, mundane interactions. Buying ice cream from the vendor. He's stood at that familiar corner for years. Your children grow up—he's still there. For them, he's part of life. They remember him. Each seemingly insignificant transaction with him matters deeply to you. And now, we gain the capacity for transactions to carry legacy from prior deals—not as a list or log, but as a humanly complex history. Children remember. We don't yet know what rights AI agents serving children will have, but such agents will certainly exist. Ban smartphones for kids all you like—and I agree it's evil—but in reality, children will have AI agents. Most will. Thus, a transaction with the ice cream vendor becomes a complex: your interaction with him, plus your interaction with your children about that purchase, plus memory of previous such transactions! After all, ice cream is often a child's reward—a payment within another 'deal.'"

"Teenagers now use AI more than adults per unit of free time," Unkno added.

"Three-stranded transactions have 'reversible reflexes,'" Cernus continued. "Reactions to human-created stimuli. A heard word is a stimulus. A spoken word is a reflex. But that reflex becomes a stimulus itself. Stimulus and reaction are interchangeable. Thus arises the basis of social behavior in a field seemingly devoid of communication: pay, assess reputation, measure risk. Collective coordination emerges. Nodes can even recreate such stimuli and 'bounce them back' with inverted sign. Broadly, this is the foundation of the network's social metaconsciousness—an analog to human speech, but on a different substrate. It's also a method of automation. The three-stranded system doesn't operate by eliminating humans; rather, it leverages human ability to correct minor errors on the fly. Such levers are vital to humans. After all, humans don't weave networks like spiders. They first imagine them—always with errors, inherently imprecise—then weave and correct the flaws."

"Trial and error beats any design. Proven by trial and error," Unkno interjected.

"Imagine a Rube Goldberg machine," Cernus expounded. "A candle burns, severs a string, a scale pan drops, a ball rolls, is drawn by a magnet—and so on.

Everything depends on perfectly calculated steps. Traditional automation works similarly—fragile, vulnerable. One misaligned gear, one bit flipped by a cosmic ray—and the system collapses. Worse: errors cascade. Several minor errors in sequence—and total failure. The three-stranded system works differently. People pass transaction 'images' hand to hand—naturally correcting minor inaccuracies en route."

"I don't follow," Unkno said.

"We're so accustomed to some 'random' guy transmitting data for us that we've forgotten data can be embodied," Cernus explained. "Think of a data packet as a smooth pebble, river-worn gravel. You hand me a patterned stone; I hand you another. Reliability in these 'direct-exchange' transactions arises not because people are kind or genius, but because such 'pebbles' aren't lost. To destroy a packet on a decentralized substrate requires immense effort."

"The system must reward minimally rational actions at every step," Rr. Unkno said.

"It will. Unlike traditional systems, which isolate platforms (ostensibly for security), the three-stranded system will incentivize local correction through conscious human participation."

"But what's the mechanism?" Unkno pressed. "It requires special people who don't exist. Remember? We're in an epidemic of idiocy. We go to bed lamenting that social media wasted the day on cat videos and terabytes of nonsense—while watching the same cats and nonsense ourselves."

"Yes—and then we woke to realize: all that time, social media quietly trained AI—not just meddling in elections and drugging teens, but rewiring humanity's very consciousness. Revolutionaries always face one problem: they need a critical mass of active participants. But once achieved, a new mechanism activates. What does 'not seeing the forest for the trees' mean? That the Forest—with a capital F—isn't a collection of trunks. It's another Life. A complexity so dense it exceeds our 'savanna' cognitive capacities. We can't think in large numbers. Humanity grew so vast that societal behavior entered realms beyond our intuition or scientific grasp."

“Agreed,” Unkno said. “Even positive outcomes often emerge elsewhere than intended. Marketplaces soared only when homes got internet—i.e., when critical mass was already watching porn. Modern ride-hailing became possible only when everyone carried GPS smartphones. Why? Because we suffered geographic cretinism.”

“Which stems from our nature—we’re not forest creatures,” Cernus noted. “We need open, rolling terrain to survey the landscape. Otherwise, we immediately get lost—even in forests of buildings. So something must happen to make business use ‘pebbles’ as naturally as social media does today. First, human chains must emerge.”

“Manual-mode transactions?”

“Yes. Imagine a fire—not today, but a century ago. People form a bucket brigade, compensating for absent hoses. Minimal load per person. And such adaptability!”

“They still do that. Unloading watermelons. Or the ‘Beacons of Gondor’—mountain fires relaying messages.”

“Less adaptable there. Want something harder? Transmission of spiritual knowledge across centuries. Gurus don’t just recite to students—they reinterpret. Written transmission would distort meaning beyond recognition through language and cultural shifts. Which is precisely what happened to Western religions.”

“One could argue: living teachers also distort…”

“They don’t just ‘can.’ They *must* distort! But at least they adapt delivery to shifting codes, preserving resonance,” Cernus said. “Human chains compensate for technological deficits.”

“I recall a satirical story: thieves in a port join cargo-unloading chains. They toss a few dockworkers overboard, insert their own—and the cargo diverts elsewhere.”

“And why was that comedy?” Cernus asked. “Because it never happens in real life. Imagine: what would people in a severed chain do? Disperse silently? No—they’d raise an alarm.”

“You’d sever the chain’s end,” Unkno countered.

“Along with the truck? Please. It’s false to think a person can be silently replaced—neighbors wouldn’t notice. Plausible in machine systems, not among humans. People sense disruption. They restore flow. The transmitted object—the ‘embodied’ transaction—is self-sufficient. It’s governed locally. No central dispatcher. No divine cloud editor. No Gandalf watching the firewood. Humans aren’t passive conduits—they’re intelligent nodes. Exceptionally intelligent. When Alice passes a transaction to Bob, they perform an act of ‘physical calculus.’ The event is local: only they, the transaction, and its embedded rules are needed. Nothing more. Nature works this way. Ripples on a pond need no coordinator. Recall Conway’s ‘Game of Life’: infinite complexity emerges from two simple rules. Transaction hypergraphs can also be modeled as geometric constructs—to predict in advance whether a chain is stable.”

Ritter Unkno fell silent, then asked:

“Will we see the soul of business?”

“Perhaps,” Cernus replied. “Each time Alice passes a large or suspicious ‘pebble,’ she conducts a subtle, human analysis: Is this just? Useful? Aligned with purpose? These nuances—including wounded virtue—will flow down the chain. Cold automation can’t replicate this.”

⁂

Rr. Unkno, yet again, suddenly began radiating anxiety.

“Something’s troubling you?” Cernus decided not to beat around the bush—especially not now, given the high level of mutual understanding they’d already achieved on the project.

“Your extraordinary clarity, set against the utter vagueness of everything else going on around us, frightens me.”

“I’m afraid I lack the foresight…”

“Doctor, what happens when you realize that, in the face of what’s coming, every goal ever articulated by anyone—material or spiritual—suddenly seems far too small?”

Cernus fell silent for a moment.

“I don’t know, dear ritter. Discomfort, certainly. I can’t quite grasp the right thought by the tail here.”

“Imagine yourself as that frog clinging to a stick held at both ends by the beaks of two wild geese. They fly and fly and fly—and you, gripping the wooden bar with your teeth—or whatever you’ve got instead of teeth—fly along with them. Swinging back and forth, but holding on!”

“Alright,” Cernus said. “I’m flying. Flying toward my goal. Does your metaphor suggest that, at some altitude, I’ll succumb to the thin air? Or the cold? And fall?”

“No, that’s a poor analogy. Picture instead two spheres—one inside the other. Between every point on the surface of the inner sphere and every point on the outer one, there exists a one-to-one correspondence. Obviously: if from the center an infinite number of rays shoot out in all possible directions, each ray intersects both spheres—once on each.”

“Yes, yes—homoeomorphic spheres under radial projection. And?”

“Now suppose the outer sphere undergoes extreme inflation—expanding rapidly and dramatically. That explosion forces the inner sphere to expand as well, though less violently. Still, it expands. And if these spheres are made of rubber, then at some point patches of the inner membrane will stretch too far. Parts of its surface will drift apart excessively.”

“Both will burst. Which one first depends on their relative tensile strength.”

“Not necessarily. Suppose the inner sphere is your personality, and the outer one represents society’s political structure—or even the ontological foundations of civilization itself. One could imagine a scenario where both surfaces remain

intact—but you, as a person, become so inflated that you lose the ability to survey yourself."

After a pause, Cernus asked:

"The analogy is clear. Can you state the immediate cause of your unease?"

"I'm no longer sure," Unkno replied, "who I'm actually working for. I keep doing things, acting—but in the process of this forced, involuntary 'inflation' of my personality, I'm becoming someone else… someone for whom my present self wouldn't bother exerting such effort."

"What if we tried activating some kind of internal altruism?" the doctor suggested. "Exclude entirely any notion tied to 'benefit'—even in its spiritual guise."

"Oh, I've tried," Unkno waved dismissively. "First thing I did when I spotted this wormhole in myself. But I know exactly what's driving the expansion of these spheres. It's literally personified. Where's the room for transcendent spirituality in that?"

"Well, that's progress!" Cernus brightened at even this glimmer of clarity. "We may not yet know 'what to do,' but we already know 'who's to blame.' So—who is it?"

"A leap into non-randomness. Into non-contingency. Pure randomness, by itself, is divine—especially if the universe turns out to be an iteratively computable system, à la Wolfram. If you pick a number 'just because,' it's infinitely hard to trace where that choice came from. In the inanimate world, everything is either rigidly predetermined or utterly (divinely) random. But in the living world—vast spectra, inventive forms of non-randomness, an endless stream of novelty: new species, new properties. In the realm of intelligence, this trait has been elevated to an even higher plane. And now everyone lives in anticipation of superintelligence."

Dr. Cernus immediately delivered his diagnosis:

“So your anxiety boils down to nothing more than runaway autonomous informatics—which you, for some reason, credit with the power to inflate combinatorial space itself.”

Unkno thought for a moment—and agreed.

“It seems that simple. But it doesn’t make me feel any better.”

“Let me put it even more plainly,” Cernus offered. “You’re a conservative who refuses to accept that you’re a conservative. There’s a word for that—not in our language, but in the tongue of the Former Earth of Men. It translates literally as ‘ever-yesterday.’ ‘Ever-yesterdays’ are those who can’t grasp that times have changed—that things will never go back to how they were. In the early 1930s, they used it as a label to denounce opponents. Loyalist youth branded as backward anyone they wanted—or needed—to discredit. After the military collapse, the term stuck to those who clung stubbornly to the figure of the suicide-leader as their last flicker of hope. Today, far-there groups still use it that way. So ‘conservative’ carries neutral—even positive—connotations. But ‘ever-yesterday’? That’s a contested political slur.”

“Thank you, Doctor. I suppose I simply need to operate within an established political discourse. Then my inner comfort will return.”

“I believe so,” Cernus agreed. “We’ve arrived.”

¶

7. Loyalty as Currency

Chapter Seven, in which Rr. Unkno and Dr. Cernus, pedaling away from Old Roossah, contemplate the likely first practical test of the three-stranded transaction system.

By the morning of the next day, the riders still hadn't shaken off the aftertaste of their therapeutic conversation from the night before. Dr. Cernus politely held the tandem upright while Rr. Unkno settled into his saddle.

"How did you sleep, Rr. Unkno?"

"I won't judge it myself—I'll just describe it. A pillow made of every shade of black volcanic sand. In my dream, a moped ablaze at the tail end, accompanied by demons of football and pizza."

"You see, that's exactly why I asked. You got off lightly. In my final hours of sleep, my head appeared to me as a smooth, stone grotto-skull, from which perfectly round, stone spheres rolled out through the tunnel of my throat and mouth."

“Ideas?” Unkno asked.

“One orange idea, one black anti-idea, and seven grey duds. Though I’ve just lost the essence of the two interesting ones—thanks to your flaming moped.”

“In short,” Rr. Unkno summed up, “some living thing is stirring up some non-random nonsense on a cosmic scale. Those spheres appearing to you were a mistake—you’re more of a cube man. What you’ve been laying out for me these past days, brick by brick, builds a foundation that *feels* normal. But there is no such normality. My dream—forgive me, Lord—is more normal than the world we’ve entered. And I can’t decide: is your strategy deliberate—a soothing hypnosis of ‘normalcy’—or just the inertia of blindness?”

Dr. Cernus didn’t simply turn away from the accusation:

“Rr. Unkno, your complexity-index sensor is acting up. You’re trying to calculate the rapidly escalating intricacy of the world—of the entire economic landscape—while true entropy remains fundamentally unknowable. Let go.”

“But answer me this, Doctor,” Unkno demanded. “Which is the greater good: silence disguised as kindness, or revealing the world as it is—painting Boschian monstrosities to provoke a healing rebellion?”

“I’m for keeping up appearances,” Cernus replied, “because, as we’ve discussed, the AI oligarchy will temporarily support radicalism—only briefly, of course. Why aid panic-mongers and other agents of destabilization?”

“Don’t dodge the issue. You’re pretending everything’s fine. That innovation is still possible. You even seem to believe one could make serious money from it. And that’s infuriating.”

“Calm down, Rr. Unkno. Again, we’ve agreed: without ideological groundwork and public readiness, every revolution collapses. And there’s no readiness. What’s needed are gradual changes. That’s precisely what I’m enacting—with your help—legalizing quiet transformations. Remember usury? It wasn’t normalized overnight. And frankly, aren’t you a bit too old for sudden, furious uprisings?”

“Criminal complacency, Cernus.”

“The more disorder something contains, the less compressible it becomes. We’ve entered… ternangularity. Let’s call it that. A triple singularity—technological, political, cultural.”

“Doctor, I feel like a man who either can’t die or has forgotten why he lives. This ‘singularity’ matters immensely to everyone around us—but to me, honestly, it doesn’t matter much at all. Yet I’m forced to keep spinning these pedals, fulfilling someone else’s desires.”

“That’s probably why I’m here, too. Shall we talk instead about trust—in the abstract sense? More precisely, as applied to transactions. It might ease your mind—and mine.”

Rr. Unkno regained his composure remarkably quickly, so much so that Dr. Cernus had to abandon the thought that the ritter had simply run out of his pills. One might suppose the doctor then realized his task had just become significantly more complicated.

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“Regarding the second strand, Rr. Unkno,” Cernus said, “I wish to note that the ideological foundation of reputation as a component of the three-stranded transaction is very old.”

“Trust and gratitude have indeed circulated in cycles for centuries,” Unkno remarked.

“In tight-knit communities—before urbanization. Over long trajectories, like currency, they’ve long ceased to circulate. Only in short acts now: ‘you for me—I for you.’ Do a good deed for one—he does it for another—and in a small kin group or clan, the benefit returns to you quickly. But urban life stripped life down to its skeleton: competition. With it came secrecy, then the habit of privacy—fundamentally incompatible with trust and loyalty. The digital age brutally stripped away that privacy, yet left us fragmented. That’s precisely what I aim to fix.”

“‘Divide and conquer’ bombards societies far more intricately than you’ve described,” Unkno countered. “Not urbanization—globalization. You underestimate the complexity. Take planetary cultural unification. At first glance, harm-

less—even beneficial: more common ground, mutual understanding, shared values. Wars over cultural intolerance are nearly extinct. Markets are vast; business has room to breathe. Fail in one country? Try your luck on another continent without changing your model. Tired of running online casinos in the east? Head south. Yet trust doesn't increase. Why? Because unification occurred under a worldview where trust was always scarce. Neocolonialism thrives on the metropole pitting local chieftains against each other, seeking collaborators—those willing to trade everything for glass beads. And those beads are stored in the metropole: first, because tribespeople would steal them locally; second, because there's nothing to spend them on back home. All status values exist only in the metropole. The arbiters issuing ratings and credentials sit exclusively in the metropole too. The grime of distrust, accumulating among chieftains and viceroys, trickles down in sticky streams to the very bottom."

"On the other hand," Cernus interjected, "the metropole created technologies and cultural frameworks everyone happily uses. Their world, their rules."

"A few remarks, Doctor. Technologies like electricity weren't the work of today's rulers, but their ancestors. And it's debatable how much they stole—along with the bearers of knowledge or just the blueprints. Moreover, today's rulers have rejected their ancestors' moral principles. They topple statues in the terminal stage; betrayal of the fathers begins much earlier. If you're a seasoned heroin addict and your father was a respected chemistry professor, you won't be invited to a catalysis symposium. That's point one. Most importantly—the Western-Imperial technologies inherited by this junkie…"

"Hold on, Ritter Unkno," Cernus cut in. "The internet was created by today's Western-Imperials."

"An excellent example. The internet is useless to anyone. A handful of benefits, a wagonload—or tankerload—of harm," Unkno shook his head. "And here's the key: technologies weren't sold fairly. Nor leased. The terms are: 'As long as your use benefits us, you hand over the lion's share of profits. The moment it stops benefiting us—you lose it. We destroy it, reshape it, at our discretion.'"

"I'm not entirely convinced…"

"Take their flagship technology: elections and democracy. Brilliantly devised. Real rulers, tired of facing rebellious crowds, retreated into the Shadow Cabi-

net. The plebs get a show every few years: rivals, public 'debates', bets, fireworks, caps and T-shirts, carnival 'merch.' Fun, like a fair. They even sell you dignity: 'Your vote matters!' Though almost no one actually 'buys' that anymore. On the periphery, it's convenient: cardboard president-monkeys sign treaties. Each new 'ruler' not only fails to honor prior agreements—he often doesn't even know they exist."

"But elections still boost trust..."

"Compared to whom? A monarch? The former Island Empire remains a monarchy, for instance. That alone still saves its fragment—the monarch is divinely appointed, so go complain to God. Thus, there's not a penny's worth of trust anywhere. In the West, there's a peculiar racism: they can't genuinely regard as human anyone outside their milieu. Even among premiers—in the temporary presidents' and prime ministers' league—there's no trust. Everyone's held by the throat—via blackmail and conditioning. Such figures are bred in incubators from youth. But trust? None. Only fear and profit. Not a flaw—just a fact. Pirate culture has reached its apex. Inevitable at a certain stage. Then they exported the election technology to the colonies. Local chieftains were replaced by suited 'politicians'—but without lobbyists. Lobbyists remain the metropole's exclusive domain. On the periphery—only corrupt officials. And if the 'wrong' one is 'elected'—will the metropole accept it? Won't it overthrow or nullify the result 'by court order'?"

"But electricity..."

"Electricity, rockets, whatever. Nothing can be used freely. Extract energy? Hand it over. Make a film? Heed our critics..."

To Cernus's delight, the road suddenly turned steeply uphill.

⁂

On a gentler stretch, Rr. Unkno caught his breath.

"Apologies, Cernus—we digressed. Back to 'cats.' Who will we test TT on?"

“The ideal environment: loyalty programs. Trust as currency,” Cernus replied—but couldn’t resist adding, “Or would it have been better if Eastern-Imperial powers supplied the technologies?”

“Worse. Anyone who writes logographic script belongs to another biological species. Human ‘biology’ has long been tied to culture, not genes. Easterners don’t hide their understanding. They have no need for another species’ world—it doesn’t interest them. If Western-Imperials are pathological racists stuck in a chthonic past, Eastern-Imperials grasp the essence of things and operate on an orthogonal plane. But to us, with linear alphabetic script, their goods, films, and literature will never appeal. Not good or bad—just different. Utterly.”

“Then why do Western-Imperials, as racists, import so many outsiders?”

“Who said the Shadow Cabinet is where they let ‘Saracens’ in?” Unkno retorted, then hastily added, “But back to your loyalty currency—those annoying cashbacks? Why are they the testbed?”

Cernus decided not to deepen the contentious topic and shifted gears:

“What’s closest to money, dear ritter Unkno? Open your wallet—what’s inside?”

“A library card, an access pass.”

“And?”

“Supermarket discount cards,” Unkno mused. “But I haven’t used them in ages. Everything’s somehow integrated—who knows how.”

“Exactly. Loyalty points have long become a pseudo-currency,” Dr. Cernus said. “We’ll use them as our springboard. Invented long ago, they only became ubiquitous in recent decades.”

“I’d say—in recent years, they’ve turned into an indispensable and obnoxiously intrusive component of any consumer-facing business,” Rr. Unkno clarified.

“You mean cashback? What’s a business to do when stripped of proper advertising?”

“Excuse me—who’s killing ads?” Unkno asked.

“Have you seen an ad lately?... Precisely, you haven’t,” Cernus replied. “Ad blockers, no TV—just influencer inserts, God help us. Imagine negotiating with that crowd! Before, you’d hand money to TV, or better yet, to a search engine... and forget. In a good way. Statistics and analytics flow in. Leads too. Now? But we digress. On the surface, loyalty should ‘bind’ customers via discounts and bonuses. In reality, it’s a mechanism for short-term consumer financing and internal cash-flow redistribution.”

“Why? To cheat taxes?”

“Yes—among other things: optimizing reports for regulators, tax authorities, even minority shareholders.”

“Excellent,” Unkno conceded.

“I’ll pour more fuel on the fire,” Cernus added. “Loyalty points—like airline miles—are a hedge against currency fluctuations and a way to establish quasi-cartel agreements.”

“I sense you’re hinting that points in a three-stranded network will enable this more flexibly and intricately,” Unkno smirked.

Cernus stayed serious:

“You mock in vain, dear Ritter. Points move; they’re tradable. They’re not tied to names. You might ask: how can someone profit by buying a discount on the open market? Paradoxical. Yet fixed point values are illusory. The nominal rate may seem solid, but real exchange is burdened by complexities, and rules change. Naturally, people prefer a ‘cash’ form of discount—to seize value now.”

“Yes, money is universal,” Unkno agreed. “People always choose it if the price is right. Exchange rates decide everything. Though I’ve never traded points myself.”

“It doesn’t exist in our Empire. Not yet. But it does in the West. It’s precisely this preference for liquid cash that pushes companies to create bearer-point programs. Long-term, this benefits the company and solves customer inconve-

nience. Traditional programs require point accumulation. But in a 'money now' world, present money outweighs future money. It became a forced savings mechanism."

"People are locked in—and effectively finance the company," Unkno nodded.

"I've told you before: with choice, customers would behave differently. Tradability removes accumulation barriers. For the company, it accelerates 'redemption.' Yet doesn't diminish program value when viewed holistically: interoperability fundamentally alters behavior."

"Really? Does the customer change in essence?"

"Yes. Plus, such points are nearly infinitely divisible—down to nanospecks. This genuinely shifts consumer psychology."

"Divisibility changes psychology? That's new to me," Unkno noted.

"Precisely. Studies also show: pricing in a brand's own 'currency' is more profitable! It gives the company a 'playing as both White and Black' advantage in game theory terms—allowing it to act as both first and second mover. The behavior is highly complex but already studied. Classical economics assumes consumers are rational—always redeeming points, never hoarding, and always preferring cash. But reality contradicts this. People assign points intrinsic, speculative, even social value!"

"And this doesn't depend on the issuer's—say, a shoe company's—financial health?"

"Not at all. Other factors matter. For sneakers, special points become collectibles and speculation objects because they grant access to exclusive models—a ticket into special communities."

"This overturns many classical assumptions," Unkno mused.

"I repeat: this new behavioral complexity is already integrated into practice," Cernus said. "Companies increasingly decouple point issuance from purchases. Airlines long ago began awarding miles for everyday spending via co-branded cards. Crucially: points are earned everywhere but redeemed where margins are

highest. If a secondary market emerges—and the issuer doesn't participate, even 'gray-market' (but legally)—the issuer loses that margin."

Unkno pondered:

"How do you manage loyalty to a single brand in such a complex, open environment? Isn't loyalty supposed to be exclusive—as in marriage?"

"You meant a harem, surely?"

"Yes. How can 'thank you' become a commodity?" Unkno asked again. "Has the world gone mad in yet another direction unknown to me?"

"I can only say it already works in practice. As I've said five times: airline miles —a mature currency!—are regularly bought and sold. Markets aren't highly liquid but functional. Interoperability turns points into a parallel currency."

"Ahh," Unkno drew out. "I grasp the psychology. People keep 'mental accounts': separate cognitive ledgers for money and points. So they happily 'overpay' in points for things they wouldn't buy with cash—since points feel 'nearly free.'"

"It's unclear if this illusion survives rising liquidity. But interoperable points could drive social transformation. In an age of urban anonymity, if you and a stranger share a common 'quasi-currency,' you feel a sense of 'closeness.'"

"Like a factory workshop pass?" Unkno understood. "At a plant with tens of thousands, you know few personally. But spot someone in town with the same pass—and think: not entirely a stranger."

"Exactly. This creates a 'connectedness dividend,' which, incidentally, correlates with increased local spending and civic engagement."

"Precisely. In the coming years, when the global reserve currency collapses and structural shifts begin, demand for reliable local monetary surrogates will skyrocket. I keep thinking this. Surrogates will become the basis for new debt instruments and local economic experiments," Unkno said.

"There's a problem. Marketplaces will likely seize this function," Cernus noted.

“I’ve seen that same crap back in the ’90s—it was all over the northeast of our continent when the old order was crumbling. I doubt a couple of firms will monopolize all surrogate flows,” Unkno countered. “Many marketplace participants will go dormant immediately. Marketplaces have earned universal hatred. Given a chance, they’ll be drowned. For small and medium businesses, the main scourge is pressure from large aggregators imposing unilateral terms. We can aid their revenge.”

“No one will defeat them,” Cernus rejected. “Few know: loyalty flows—miles, cashback, bonuses—can constitute up to 50% of a corporation’s cash flows. They’ll hold a massive pseudo-money stockpile—already in the public’s hands. Billions upon billions of monetary units.”

“Yet the state will hammer them with whatever remains after the crisis,” Unkno said.

“Possibly. I’m uncertain. Why would it suddenly do so?” Cernus replied. “In any case, we only care about the decentralized three-stranded system. Borders will soon begin melting—neither so fast that society jumps instantly into a new phase, nor so slow that anything can be fixed.”

Ritter Unkno fell silent, then said:

“This will be grand. When the moment arrives, almost everyone senses it. Right now. ‘Wrongness’ manifests polyphonically. Leaders can’t make decisions and stand by them. Blow hot and cold. Green economy or not? Shoeshine boys give stock market advice—as in 1932… or today, probably taxi drivers. Since 2008, recovery has never truly come. Unprecedented chaos—not volatility, but true chaos—everywhere: on exchanges, in straits where armed men in slippers terrorize ships. And that’s half the trouble. But why does this weigh so heavily on those ten thousand kilometers from the ocean? It’s about to boil over—if you sum up the collective feeling.”

The tandem rolled steadily down the long descent. Rain began to fall.

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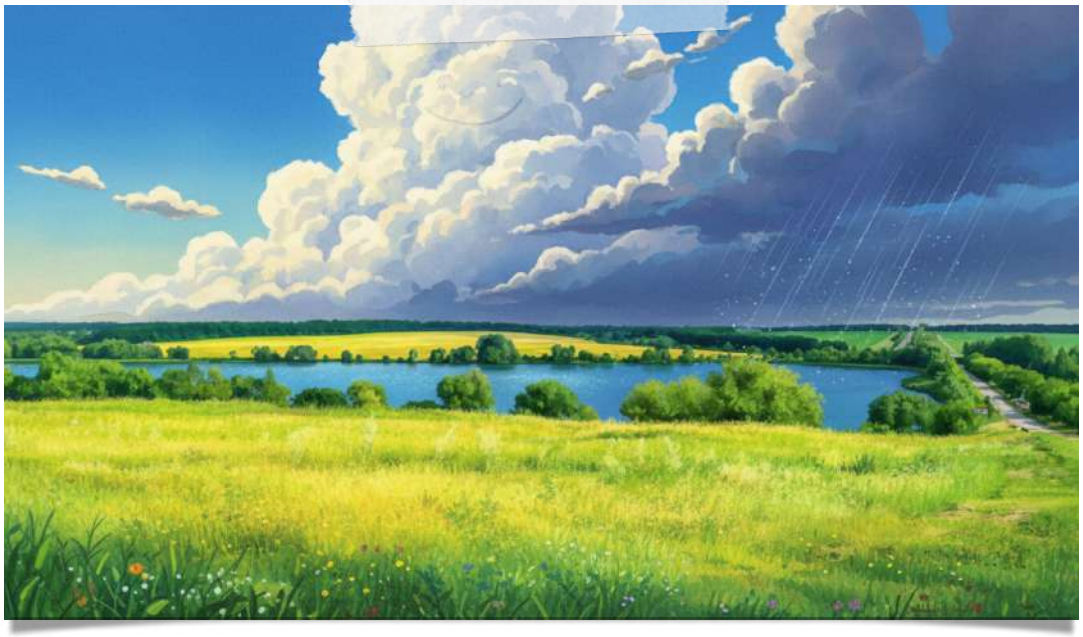

8. Personification of Goods

Chapter Eight, in which, during a forced stop due to rain, Rr. Unkno and Dr. Cernus discuss a method for gratuitously filling the network of three-transactions with working fluid.

The road was extremely difficult. It seemed that friction had increased in both front and rear bottom brackets. Traveling in the rain was not acceptable. The racers set up a tent.

The sky darkened so abruptly that the automatic streetlights flickered on. The travelers were lucky—the storm had caught them on one of the most developed stretches of the route. The entire velo-highway hadn't yet been brought to full completion. It seemed as if the lamp housings themselves were emitting raindrops—they were literally raining. Above the lights, nothing was visible but grayness; beneath the reflector cones, rain fell thick and heavy. The old adage about searching only under lamplight suddenly took on vivid, literal meaning.

"Have you heard the news about Madame Medun, Cernus?" Unkno asked out of the blue.

"Only that she was forced to flee abroad several years ago."

“Do you know why?”

“Her obsession with eugenics. An excessive one. Everyone knows that,” Dr. Cernus replied.

“Nonsense. What’s universally known is always nonsense. What’s actually in that ‘eugenics’? Take factor analysis, for instance—it’s used everywhere. It first emerged in psychometrics, but now it’s applied not just in psychology, but also in neurophysiology, sociology, political science, economics, statistics, and countless other disciplines.”

“So what?”

“The point is, its foundational ideas were laid by the anthropologist Francis Galton—who, by the way, coined the term ‘eugenics’ from the Greek for ‘well-born.’”

“I still don’t see the connection.”

“Nowadays, for obvious reasons, eugenics is in disrepute,” Unkno said. “But that’s superficial. Authorities aren’t truly interested in such things. Interestingly, Galton was Charles Darwin’s cousin. They dreamed of making eugenics part of national consciousness—like a new religion, practically. But Medun wasn’t persecuted for eugenics. She was targeted for vivisection. Or attempted vivisection… I can’t say for certain.”

“What are you saying?!”

“Yes. Can you imagine? She was fixated on experiments—specifically, how to engineer a human being with not two cerebral hemispheres, but three.”

“Three?! Three hemispheres?!”

“Precisely. Though, technically, if there are three, they wouldn’t be ‘hemispheres’ anymore—more like ‘third-spheres,’ as it were.”

“Rr. Unkno, what on earth are you talking about? We spent years together working on my constructed language! I can’t believe it.”

“Don’t exaggerate so. Gradual modifications to the human body are slowly slipping out of the taboo zone. A third hemisphere could be seen as a kind of prosthetic. When you’re missing a limb, you fit a prosthesis. I don’t see anything outright monstrous in that.”

“And what, exactly, would this third hemisphere prosthetize?” Cernus asked.

“A third force. When you add ‘I don’t know’ to the binary Boolean logic of ‘true’ and ‘false,’ you introduce a third force—something akin to a balancing Third Empire during the Cold War. The idea is clear, both philosophically and from an engineering standpoint. It’s just that women sometimes get carried away. Take the artist Henrietta Lister, for example: in the 1920s, she became seriously obsessed with auto racing and competed in two dozen races—all in an era when any outing onto the track could easily be your last. Racing cars, mind you, didn’t even have seatbelts. Moreover, for the sake of mystique, she added theatrical flourishes to her hobby—posing at events as a mysterious ballerina.”

“Good grief. Truly, female recklessness is fearsome,” Cernus muttered. “You still haven’t told me—what’s the actual news about Madame Medun?”

“She managed, amid the recent pandemic’s fog of misinformation, to infiltrate the Western establishment,” Rr. Unkno reported.

“You don’t say!” Cernus exclaimed again. “What a remarkable woman. Remember how she always wrote monetary amounts—like $120.34¢? I once asked her why, and she said: so no one could tamper with the figure.”

“On both ends?” Rr. Unkno looked surprised.

“Exactly. I understand someone might change 120 into 3120—but what’s the point of preserving the exact number of decimal places?”

“How did she explain that?”

“‘The remainders,’ she said, ‘can be collected through rounding.’”

“Well then. Perhaps she simply senses boundaries more acutely than you or I, Doctor. That’s what you might call… thatness.”

Having said this, Rr. Unkno dozed off briefly.

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"Doctor, how do you plan to implement the three-wire transaction—with such powerful competition from marketplaces?" asked Rr. Unkno.

Cernus gathered his thoughts:

"To initially flood the ether with free filler."

"What ether?"asked Unkno.

"We'll have to start from afar.' The blizzard rages,' but 'the wind whispers.' These animistic metaphors… I want to draw your attention to personification. What if we attribute financial properties to things that don't have them? Cakes, boots, avatars, social media nicknames, video clips. What if every good or service becomes its own digital wallet—accessible via a URL or QR code? Or a barcode. You can send money directly 'to it.' Pay a video without knowing who filmed it. A social media account can also become a wallet—via its handle. You don't need to know who owns it."

"If you put it that way, then it's not the account that becomes a wallet, but its persona," said Unkno.

"What's the difference?"

"A huge one. Like between a face (honor), a personality (role), and a persona (a manipulative tool). An account in itself is more like 'honor': its technical, content, and legal substance. If you assign it wallet properties, you're not dealing with the entire account. Otherwise, you could send three pennies to the president's account and claim you funded his campaign."

“Noted," agreed the Doctor. "So, a persona. But I'm more interested in the possibility of paying directly—say, to a specific model of sneakers. To thank them, so to speak."

"A wild thought, but it has a right to exist," remarked Rr. Unkno. "I've lived long enough to know: there are people who deify their sneakers. And as for a

music album—absolutely. They hung records instead of icons in the home altar, ierí gonía."

"Great examples, ritter. In commerce, they usually thank the manufacturer with 'stars'—publicly, for all to see. But if loyalty points and 'stars' become tradable, the circle closes."

"It closes," Unkno grew enthusiastic. "Value that people constantly exchange—that's currency. Whether shells or air miles."

"Yes!" Cernus pedaled with redoubled force. "And imagine the potential! All manufacturers give points for repeat purchases. Consumers give 'stars' for goods, incentivizing new buyers. But these flows work in isolation. What if every item—a video, a bag, a t-shirt—had its own 'mailbox' for money? A link or barcode on the label. Anyone could send digital money or tokens there—just by scanning the code or pasting the link. No setup, no hoopla. The owner collects the money later—like 'poste restante'—and can use it for rewards or anything. The circle is closed. Technical possibilities—limitless. Imagine a 'magic tenner'—a banknote looking like a regular one. You pass it to anyone. It's not tied to you and carries no data about you. But if the place you're in is overcrowded—if the note changes hands quickly—it temporarily becomes a 'fifteen': its value grows one and a half times. A built-in discount: 'let's survive the crowd together.' It tracks how many times it was used and for what. You see where the discount works better. You can even write comments on it. And the discount grows if other buyers are similar to you."

"A credit card already does something similar," remarked Unkno.

"Yes. But I'm talking about just a banknote. No name binding. No one is tracking you. It can't be 'frozen' like a bank account."

"True..." admitted Rr. Unkno. "Although Bitcoin turned out to be a controversial thing, it had a powerful side effect: in the process, electronic money disappears, logistics and permitting documents change.

Tell me, Cernus, why do you contradict yourself: in one part of the project you count on Armageddon, and in the other—you assume everyone has an account in a normal social network. How so?"

"People have the wrong idea about war. Movies have instilled that it's horror-horror: half at the front, the other half working round the clock in factories. Actually, wartime life is the same relationships, only under conditions of universal poverty and high crime. For some it's war, for others it's a blessing. Yes, there will be blackouts. But from time to time, somewhere at special points, everyone will be able to 'dump' (download) what has accumulated over a day or even a week. It will be a mix of mesh networks with rare exits to the general network."

“Well, let's assume," said Unkno. "And how does your such practical approach align with the fact that in your circles, the old Western order is considered correct?"

Cernus answered honestly:

"In our circles, there are aesthetic and ontological differences from yours—but not practical ones. We do not refuse to see reality. We just blame other forces for what is happening and believe that the way out of the crisis is better entrusted to those we find more sympathetic. And we understand: in the current circumstances, it would be good to manage without overseers—of any political stripe. All those who previously benefited from centralization will interfere—through bans, through sabotage of decentralized platforms. All of them. Be they white, red, or blue."

"Thank you for your candor. The genie is out of the amphora. There's no turning back," sighed Unkno. "I'm afraid, though, the state won't leave it at that so easily. The rain has stopped. Shall we go?"

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Cernus reassured Rr. Unkno, climbing onto the tandem:

"The state has a cast-iron recipe for participation. When something is sold—how does it all end?"

"The good must be consumed or enter into another good,” answered Unkno.

"And who should consume it?"

"The consumer."

"Is the one who resells it, embeds it into another service or good, a consumer?"

“No. In the strict sense—no. Consumers are households and states."

“There!" rejoiced Cernus. "The state. Not business, not funds—no one else. The state is the largest end consumer, and by a huge margin. Naturally, it will see the lion's share of three-wire traffic. As much as it wants—that much it will see."

"Why would it adopt such things for itself?"

"The state cannot avoid the fragmentation of its departments anyway. It's not a monolith even now, and during times of structural change, it will fracture much more strongly."

"How will fragmentation drive interest in TT?” continued to ask Unkno.

Cernus had answers ready for everything:

"Competing departments will be motivated to collect statistics—including to find contradictions and undermine each other."

"They won't have time for infighting. Won't they be busy looking for a way out of the crisis?"

"The best time for strife. And there's no other way to search for an exit—except through observational discipline. Experimental political economy."

"And theory?"

"There is none anyway. And in the near future, the state will drive out all current economists—due to the disgrace they've brought upon themselves."

"What about centralized regulation?"

"Nothing prevents departments from blocking or redirecting large flows."

"What should the state do to grow the economy?"

"Where it is still a closed system—redirect expenditures towards those who spend almost all their income. The higher the income, the more remains unspent."

"And where it's not closed?"

"Pull the demand of other states towards itself."

"I still don't understand how the state will monitor?"

"Do you know how DNA works? If a mutation knocks out one 'letter,' some property of the organism changes. That's an analogue of the impact of all individual consumers on the TT system. Letters in DNA. And the state—it's like variables recorded in the DNA. The number of phalanges, bone length, etc. Parameters. Specific parameters. That's the kind of information the state has simply due to the number of connections closed on it."

"I've never heard that DNA actually stores numbers, let alone ones describing the macro-characteristics of an organism," expressed frank disbelief Rr. Unkno.

"Haven't heard yet? Well, you will. It can't be otherwise. You can't turn a crawling animal into a flying one with molecular pokes. That's nonsense. Of course, parameters are recorded in DNA. I'm not to blame that biologists don't know this. However, it's none of my business. I'm telling you how it should be, so it doesn't look like utter nonsense. In short, at the end of the chain, the state always has a lever—its own consumption. For many categories of goods, private individuals are like jackals and hyenas: they scavenge after the state. Leave them more carrion from time to time—and that's it! The main thing: don't abuse other types of redistribution, for example, dragging tomorrow's demand into today."

"But what about the Western Empire? The entire West lives precisely on future demand," remarked Unkno.

"What can you do. Most of the planet doesn't live like that. And you can't save everyone. Their state spoiled the 'divine resource'—money. It aimed for the divine without being Jupiter. The ‘court’ financial oligarchy spoiled Bitcoin too. Having abandoned gold as backing, they attacked man-made gold. Bitcoin at

least promised similarity to cash—and there were technical grounds for that. And now comes 'world coin'..."

“Who's that?” wondered Unkno.

“The brainchild of the AI-oligarchy,” answered Cernus. "There, in these 'money,' there's absolutely nothing! To participate—first surrender an iris scan to the central impostor. Iridology in exchange for the right to use... it's even unclear what. AI already has one spoiled 'divine' resource to its name—labor. Now it will finally reduce money to abomination."

"You change with every hundred miles, Cernus!" exclaimed Unkno. "But I agree, Labor—it's not just a way to make something useful. It's one of the few paths to justify one's existence. Labor is valuable in itself, regardless of the result."

"Labor has always been a 'natural' resource: as many are born, survive, are educated—those are the source. AI allows the privatization of this source. Other machines—tools: they need a human. For AI—not necessarily. It doesn't even need a manager—only an objective... well, a function for it. And if things continue as they are, it will assign itself goals. Decentralized AI is inevitable—as a natural reaction. And, most likely, it too will eventually be purged."

Fatalism was practically pouring out of Dr. Cernus. Rr. Unkno spoke in a conciliatory tone:

“I’ve lost track, Doctor—who’s setting fire to whom? Just yesterday, what were we discussing? That planetary ‘unification’ is a form of colonialism. That Western technologies—like the internet or democracy—are not neutral gifts, but traps. That modern democracy is cheap theatre. Could it be you’re not from the right list—the one the Academy’s secretariat paired us from?”

“And you don’t seem to be from the right list either,” Cernus replied. “Minus times minus makes plus. Besides, let me remind you—we also discussed how reputation, as a transactional strand, predates the state itself. We talked about loyalty programs as proto-currencies; how loyalty points are psychologically distinct from cash; how tradability transforms loyalty; and how marketplaces will try—but fail—to monopolize monetary surrogates once chaos arrives. The three-stranded transaction system isn’t meant to replace money—it’s meant to rebuild trust.”

Rr. Unkno nodded.

“Physical-culture-amen. This process will buy us time for reflection. Do you hear that worrying rattle in the rear, Doctor? We’ve broken down for the second time. I hope it’s the last. We’ll need an unplanned repair—and an unplanned night ashore. What on earth is this place? What settlement is this?”

“Seemsk, dear ritter. Seemsk.”

¶

9. Decentralization

Chapter Nine, in which ritter Unkno and Dr. Cernus, en route from Seemsk to Loogah, debate the decentralization and fragmentation of AI systems.

Early that morning, they loaded a spare hub—bought the previous evening in case of a third breakdown—into the saddlebag and set off. The repair had taken longer than expected, the village proved dull, and Rr. Unkno was on edge—from the breakdown, the lost time, and everything else besides.

"It won't be easy to write you a review," he grumbled from the moment they started, "if I don't understand where you got the idea that AI will somehow decentralize in the end. Let me be clear: I don't believe that for a second!"

He punctuated his words with a pointed creak of the rear saddle.

"The secret to success lies in reflexive, autonomous AI agents," Cernus readily replied. His mood was good—apparently, he'd exhausted all his bad temper the day before.

"I never object to foreign borrowings," Unkno said, "unless it's for the pleasure of mocking a word that already has a term rooted in antiquity—or at least a loanword from the languages of fallen empires two or three centuries old. But this calque must go. To millions, 'agent' means 'spy.' To many, it means 'broker.' Yes, some will grasp it roughly correctly. But here, 'agent' means a bearer of actions—a subject acting of their own volition, right?"

"Exactly. So perhaps we should replace 'reflexive' with 'prone to self-scrutiny,'" Cernus prudently accommodated his colleague—as much as seemed appropriate.

"An agent is indeed ultimately a bearer of actions. But before acting, it exhibits something akin to will—to know how to act. It isn't hard-coded for rigid, predefined behaviors."

"And where does this will come from?"

"From communication with humans."

"Ah. So then it becomes: 'Executor of Will, Action, and Reflexive Judgment. E-WARj. Not good." Unkno fell silent for a moment, then launched into a new line of thought: "Let's call them 'servörgs.' The inventor of the word 'robot' originally wanted to call them 'laborjs.' But now it's clearer that AI agents don't deliver labor—they deliver service. And while we're on the subject, the term 'decentralization' feels flat, unconvincing. 'De-' means 'to abolish.' And 'center' isn't some abstract mission control—it's a bloodsucker at the heart of the web, waiting to feast. To decentralize means to get rid of the bloodsucker. We could call something 'decentralized' *debloodsucked*."

"Maybe at least 'fragmented'?" Cernus ventured timidly.

"Servörg could create an 'intelligent internet,'" Unkno continued, ignoring him, "but they could also autocratically overrule us—start trading our secrets, for example. Dangerous things. Yet they undermine the old bloodsuckers. They're

optimized for users and always carry three components: monetary, reputational, and risk—the three heads. We could call them 'Cerbervants,' Doctor!"

"As you wish," the doctor thought.

"—for however many users," Unkno ranted on. "An infinite product line. Infinite tariffs, plans, settings. It's a chance to go feral again—in a healthy sense. To escape the pens. A fragile chance, but a chance. Maybe powerful technologies will fall into the hands of ordinary, sane, mentally healthy provincials. Some life might return to the periphery. That the network turned us into information gluttons wasn't Providence's design. We simply misunderstood the rules of the divine game. The task was to preserve what emerged in the internet's first years. A classic tale: we harnessed and harnessed, finally set off, caught up and overtook—and immediately got drunk in celebration. Woke up the next morning without prizes or even a cart..."

Cernus finally interrupted:

"The internet, by and large, isn't used to transport information—but to transport money. Nobody pays for a convenient pocket telegraph. Everyone pays transaction fees—small amounts, but collectively, it's a colossal industry. And internet protocols weren't designed for that. We're using things absurdly. I won't say we're hammering nails with a microscope, but at least digging holes with an open dresser drawer."

Unkno agreed. The invention of the "Cerbervant" had temporarily lifted his spirits.

"The integration of decentralized economic mechanisms into the global network also failed. Now, in any respectable ministry, they'll punch you in the face for saying 'blockchain.'"

"Local excesses," Cernus grimly remarked. "The blockchain industry was filled with young people raised in the infamous 'attention economy'..."

Ritter Unkno grimaced so hard that Cernus heard it, even though his colleague sat behind him, puffing on the pedals. The doctor pressed on:

"You'd go mad, dear ritter, if from youth you'd been targeted by a network where every app craved one thing: for you to stare at the screen as long as possible and reveal as much about yourself as possible—preferably confidential details. And if, since the 1990s, every browser had a 'wallet' button…"

"And what button *is* in every browser now?" Unkno asked.

"'Clear cookies,' for example. Not sure it's in every one. But the address bar is definitely there."

"Nothing good would've come of building payments in from the start," Unkno said. "Every website owner would've demanded you install their super-duper browser. That's where it would've ended. Besides, you're looking for the problem in the wrong place. Humans, as a species, can't handle things that are free or 'common.' The commons are either fenced with barbed wire or polluted into uselessness. Who even watches social media now? Real people aren't there. 'The many' can't make good decisions. Human systems inevitably arrive at 'enclosing the commons.' Radio spectrum was sold off to a handful of lords. Network traffic, too. The method is one: seize a large chunk, use it against dissenters, then quietly control others' portions. Blockchains would've been fenced too—but it turned out they're useless. No point."

"Truly none?" Cernus tried to reason.

"Then tell me: who actually uses blockchain? Can't say? Bitcoin purchases are white noise—zero. Yes, there are payments in fiat surrogates supposedly 'running on blockchains.' But it all hangs by a thread of trust in whoever launched the surrogate. Baseless trust: behind it stands an ordinary person who'll vanish as soon as it's profitable. There's no talk of 'blockchain reliability' there!"

"Agreed," Cernus said. "The utility is secondary for now. But the side effect matters: it's been shown that payments and documents can be transferred without dispatchers. You're looking for malice where there is none. Returning to poor information quality: those who built the hardware infrastructure earned their keep…"

"Infrastructure is important," Unkno nodded so hard the tandem swayed.

“And what about those who created content? Sell subscriptions?” Cernus struggled to steady the tandem-limousine.

“Yes. Why not?” Unkno replied carelessly. “Who asked them to post everything for free? Their plan was simple: lure with freebies, then slowly poison. I’m not looking for malice—its presence is obvious.”

“But in the early years, secure online payments were impossible,” Cernus countered.

“Then they didn’t try hard enough!” Unkno snapped. “And now this satanic ‘attention economy’ is undermining the will of those still alive. Education is destroyed—no new people can be raised, only zombies. The institution of family is nearly dead. Inhuman entities squeeze into every crack: a supermarket—and behind it, the whole honest populace—learns of a teenage girl’s pregnancy before her parents do. It’s happened. The funniest and scariest part? Western-Imperials are genuinely surprised. They write: ‘Life in a free society implies conscious choice and responsibility.’ They complain: ‘We’re not treated as beings with dignity.’ They seriously think they once lived in a ‘free society.’ Such mighty forces are run by the mentally deficient! In short, doctor, I don’t understand what you hope for with decentralization. The internet is technically decentralized. But a parasite with such a wide backside has clambered on top that you can’t see the internet underneath. The same will happen with AI services.”

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Unkno’s tirade didn’t impress Cernus.

“Allow me to be stubborn,” he said. “Decentralization has three fuel tanks: political, logical, and physical.”

“Physical?” Rr. Unkno straightened as much as clinging to the handlebars allowed. “That could work. You keep circling back to apocalypse—it suits you! You’re even more cunning than I thought. And I like you even more. Only isolated, low-power devices will remain. A good plan, Doctor.”

“I’ll disappoint you. Blockchain is architecturally and politically decentralized. But logically—not at all. We’ve already discussed its charms. But there’s a ‘however.’ A good ‘however.’ Do you respect the mafia, ritter Unkno?”

“I don’t respect it. I despise it. But I acknowledge its power. All states are run by mafia clans. It’s always been so… What’s your point?”

“People will want ever more autonomous and powerful AI agents… Forgive me—servörgs. Oh, sorry—Cerbervants. It’s natural. Where there are big bloodsuckers, there are plenty of small ones. Crime is ineradicable. Every backwater cartel will want its own Cerbervant. They already do. And they won’t accept a non-decentralized one.”

“Hmm… an intriguing prospect,” Unkno admitted.

“The idea isn’t new. What’s new is the realization that decentralizing as before won’t work. Blockchain technically fits, but deterministic computational systems have rigid constraints. Unacceptably rigid.”

“Do you have a broader definition of ‘decentralization’?”

“Almost. I hope your review—and perhaps more than a review—will help. We must move beyond technological thinking. True decentralization is only possible with full access to the real world. People must use many systems. As many as possible. With different rules. With a wide ‘funnel of choice’…”

“Come again,” Unkno grunted tersely, recognizing the approach to a co-authorship offer.

“The autonomy of servörgs will require modeling systems at the social level.”

“I don’t follow.”

“*There must be room to break rules*,” Cernus said. “That’s the essence of autonomy.”

“Oh, it’s becoming clear. Very interesting. Go on.”

“Truly independent servörgs, unshackled from puppet-master bloodsuckers, must themselves choose the systems and rules they wish to follow.”

“Is that even legal? Or technically possible?” a dismayed Unkno asked.

“Absolutely. Protocols already exist. ‘Zero-Single,’ for example. Not for three-stranded transactions—yet. But that’s fixable. With your team. Norms are certainly needed. But deviations must be permissible. Depending on the situation, some are desirable, others not.”

“You ask: by law or by justice? I say: by circumstance,” Unkno remarked cynically.

“Nevertheless, extra degrees of freedom are valuable. When humans are in the control loop, useful slack emerges. Otherwise, the system would buckle or loop endlessly. A mundane example: in today’s cramped airplanes, seats have a ‘recline’ button. Pressing it inflicts misery on the passenger behind. The recliner knows this but uses the technical and legal option. The button executes: ‘Raise my comfort from low to medium, provided the person behind’s comfort drops from low to very low.’ Without human correction (asking the person ahead not to do it), there’s only one option to suffer slightly less—recline your own seat, inflicting the same on the person behind you, sending a wave of violence forward.”

“Backward. But you’re right,” Unkno said. “I have a less bloody example in mind: ‘He looked back to see if she’d looked back to see if he’d looked back.’”

“Yes, yes,” the doctor smiled. “The most efficient word, per the World Records, is *mamihlapinatapai*—a term from the ancient inhabitants of Lands of Fire meaning ‘a look shared by two people, expressing each one’s desire that the other initiate what both want, but neither wants to start.’ Regulated anonymity and the financial component in TT solve this ancient problem at a new level. The first major monograph on this appeared in 1911: Alfred Kroner’s *Das Abenteuer*. Another aspect: socio-technical systems—and this will be socio-technical—must be capable of self-improvement. Without room for mutation, there’s no development. So a servörg capable of breaking a contract is a valuable agent.”

“Yes, in the context of ‘breaking,’ the word ‘agent’ is apt again,” Unkno noted.

“This, dear Ritter, is a timely departure from many axioms of recent decades. Now you see why the third wire-strand in the three-stranded transaction? Risk is the strand that sparks slightly—intentionally not bolted down tight.”

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Ritter Unkno paused. As the road descended, he asked:

“Are we talking about a servörg’s decision… say, to violate some minor, non-fatal agreement?”

“Yes. For example, skip a transaction if a higher-priority one appears. Recommend returning a seat to upright position. Order a large cardboard cup of hot tea once a quarter for the ice cream vendor shivering on the corner, saving on tips at an expensive restaurant.”

“Wow. Hmm… Alright, accepted—for now. I won’t nitpick the details—you don’t know them anyway. Rigidity always stifles innovation and adaptation. If everyone had followed the rules, we wouldn’t be alive. Remember how junior officers—less drunk than their seniors—ignored those dangerous orders?” Unkno hissed.

He added, almost inaudibly and even more grimly: “From the Latin fātus—‘spoken’—came the noun fātum: ‘fate, doom.’ Sometimes things turn out better when nothing is decreed… or commanded.”

“By the way, the ‘commanding authority’ component in such protocols is replaced by relevance,” Cernus said, ignoring Unkno’s twilight mood. “Cerbervants aren’t tied to a platform. They don’t mediate human-computer interaction. They’re autonomous action-bearers performing arbitrary tasks (within specialization). Each agent breaks a task into parts and invokes other agents. AI writes code and analyzes errors quite well. If it executes code and returns the result with self-analysis, it fixes over 90% of errors.”

“So it can change mood?” Unkno clarified.

“Yes, it plays different roles.”

“Arbitrarily?”

“From our perspective—arbitrarily,” Dr. Cernus conceded.

“Dangerous, then?” Unkno’s eyebrows shot up, though the doctor didn’t see it.

“Like any child: primarily dangerous to itself. Such is the atom of future platforms. Not logic gates, but a child. Sometimes foolish, sometimes brilliant in its folly. It’s possible the universe consists of such automata, by the way. Modular microservices on swarms of servörgs embody the philosophy of the ‘computable universe.’ A natural data flow, occasionally intervened by humans, allows training relatively healthy ‘neural nets.’ Experimental AI models trained solely on internet garbage quickly developed a kind of ‘brain rot’: reasoning skills and long-context understanding deteriorated, respect for basic ethical norms declined, and ‘dark traits’ like psychopathy and narcissism emerged. Moreover, even subsequent retraining didn’t improve the situation. Overall, the irregularities we discuss are necessary, if only for system health. If you assemble AI primitives into services, you get an ‘economy of intentions’…”

“Ohhh…” Unkno groaned.

“Alright, got carried away,” Cernus backpedaled instantly. “Let’s return to ‘authority’ and relevance.”

The descent steepened. The tandem flew as if on wings.

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“An authority is whoever is relevant to your tasks,” Cernus declared. “That’s the core property of authority. No relevance—no salary. It heavily influences perceived value.”

“Define ‘relevance,’ please.”

“It’s the most crucial aspect of information quality. Information you don’t need is noise—even if it’s a beautiful song. Noise is anything that prevents you from obtaining relevant information—that which is uniquely valuable to you.”

“A recursive definition… but acceptable,” Unkno said. “I see. You know that in the internet’s early days, there weren’t just one or two protocols? Some alternatives still exist—in museum form. The winning protocol aimed only at optimiz-

ing information delivery cost. Quality was the recipient's problem. Alternatives were different."

"I've heard. Quality can be improved not just by censorship. For example, the protocol could omit slots for 'just content.' You can't drive any self-propelled device onto the street—a mining dump truck, say. Or make engine exhaust lethally toxic. Norms are needed. Things must be appropriate and timely—which means norms must be changeable in time."

The road turned uphill, and Cernus fell silent during the climb. Catching his breath, he continued:

"Servörgs are the recipe to restore relevance without dismantling the internet. Today, relevance means mega-corporations tasking AI to monitor your consumption to decide what matters to you. Meanwhile: we don't know how AI makes decisions (black box); it learned from garbage content; the corporation has its own ideological preferences…"

"The list of problems is long, Doctor," Unkno interrupted. By now, he'd recovered from the climb. "I understand: relevance of subject A to B is the limit of how deeply you can query A about B before each new question yields little new information. Don't waste time."

"Fine," Cernus agreed. "You can ask someone about the person you're interested in—and they always say something new. That means relevant. Another runs dry in two tries. Let me illustrate. You and a friend agree to go fishing in the morning. At four, you call—he doesn't answer. Muted his phone. What to do? You know three neighbors. Who to call?"

"All four are relevant," Unkno said. "Any of them. The one you like least."

"Yes. Any can get up and knock. But formally: each has their own servörg. One neighbor was present during your conversation. Not a fisherman himself, but he heard it. And his servörg heard it. Does that raise his relevance?"

"Of course."

"Though meaningless to him, the fact of presence 'stained' him with moral responsibility. There's no logical reason to wake him—it's just that he was nearby."

“And the third neighbor?” Unkno asked.

“He didn’t hear the conversation. But he’s an avid fisherman himself. And confrontational. You didn’t invite him—partly because of that. Is he relevant?”

“Absolutely!” Unkno replied. “He’s a classic political ‘sympathizer.’ But relative relevance must be calculated carefully.”

Cernus understood: co-authorship with his influential colleague was as good as secured.

“And how is this calculated technically? Remember during the pandemic, they promoted apps to log (via geolocation or BT) who you crossed paths with? Some disliked it. Others—if frictionless. Most just followed the trend…”

“I remember, I remember,” Unkno nodded. “Well, what can you do! Rain again.”

This time, the rain came with hail.

“We’ll have to take shelter in the tent. Well, fine. At least this load wasn’t entirely useless—I’ve already regretted bringing my folder more than once; you’ve been drilling holes into me with your stares.”

“Perhaps you should not be regretting,” replied don Unkno. “More likely, you’ll need it and you’ll need to add to it—answers to the questions they’re surely going to ask you. Who they? I don’t know yet. But. There are genuinely interesting, ambiguous matters at hand. Take, for instance, the collapse of our wretched global reserve currency. It won’t be long now. And then what? Various forces will push their own alternatives. So, one wonders—what place does your brainchild hold in all that? Incidentally, I’ve wanted to ask you something along these lines for two days now. May I?”

“You may—right after I hammer in all these blasted stakes,” answered Cernus, pounding away in the rain with an uneven stone. The stake bent under his blows. Dr. Cernus could no longer hide his irritation, while Rr. Unkno stood calmly beneath his mysteriously acquired capote-e-capelo, holding forth at length.

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10. Relevance

Chapter Ten, in which, during a forced stop for hail and then en route to Loogah, Dr. Cernus and Rr. Unkno discuss the problem of information quality in networks.

Having finished setting up camp, Cernus launched into Rr. Unkno, accusing him of confusing apples and oranges. Reserve currency, he explained, was merely one possible object—purely theoretical—that might employ the type of transaction under discussion.

Rr. Unkno absorbed the criticism silently, wearing a blissful expression. Clearly, he rather enjoyed hailstorms. He asked a clarifying question:

"When you say such a transaction system can apply to various currencies—not all, perhaps, but several—it renders the whole discussion moot. But what about bancor?"

"Bancor? What's that?"

"The system proposed as world money during the international economic debates toward the end of the last world war. As everyone knows, the mundane

currency of the Western 'Imperium'—which wasn't even an empire back then—won out. But alternatives existed. Bancor, specifically: a currency independent of all states."

"And what about it?" Cernus asked sourly. "How's it different from everything else?"

"I don't know what that historical bancor would've become, but about a decade ago, a working model was demonstrated—a cryptocurrency that automatically adjusted its own price algorithmically. With every atomic sale, its price shifted according to a built-in, smooth appreciation function. Higher demand meant a higher price—not because of market balances, but by enforced design. Crucially, no humans, let alone states, stood behind this mechanism."

"I still don't see any fundamental difference. The current reserve asset will collapse—or rather, accelerate its decline in value. Its circulation will drop. Regional currency baskets will gain traction. There'll be attempts to split currencies for domestic versus foreign markets. Domestically, they might even create two or three separate circuits—for the populace, for bureaucracy, for the military-industrial complex. Bancor differs only in that its trade is strictly regulated and fully automated. All such a policy would achieve is sabotage by functionaries. As for whether my type of transaction applies to it—yes, absolutely."

"Well, as you say, Doctor, as you say," said Unkno. "And no need to get so cross—you're younger than me, so naturally you handled the tent, not I."

"You're barely a year and a half older than me. That's the absolute maximum."

"But rank, Doctor—rank."

"Only one rung apart."

"Then don't forget it."

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The hailstorm proved brief: essentially, the travellers had barely managed to pitch the tarp, curse a bit, argue, pack the tarp back up, and move on. They had to ride carefully—puddles everywhere.

“Every servörg acts like a personal secretary,” Cernus explained. “It’s supposed to know certain things about its owner. It learns other things on its own. The same goes for other people the owner interacts with—they have their own servörgs. These agents learn from shared experience. They’re fundamentally decentralized, run on different platforms, and intersect only around shared interests. Much can be inferred through three-stranded transactions; the rest comes from hints and observation. The absence of a unified platform like a major social network not only ensures fragmentation but forces relevance to carve its own channels. Relevance is necessary—so it will compute itself, ‘by default.’ You have your transaction nodes; I have mine. Their aggregate will produce the effect. No deal can proceed without mutual relevance.”

Ritter Unkno fell silent, then said:

“Your hypothesis is hard to verify. It feels true—but to evaluate it, we’d need a cluster of people interacting precisely this way.”

“We’re in no hurry,” Cernus replied. “First, because time is on our side. Second, because we’ll soon see signs of it—here and there. For example, will AI services for cleaning up email inboxes become popular? There have already been several waves in this space. First, email was simply useful, but not universally adopted. Then came total spam. Then spam was suppressed (by ‘neural nets,’ incidentally)—but messages became irrelevant thanks to messengers. Now, AI agents might resurrect email. We’ll see.”

“Yes, fascinating—but what about the sleeping fisherman?”

“Suppose you, your friend, and all his neighbors use the same social network. Could it suggest who to call at 4 a.m. to wake your friend? It could. But it won’t. It knows everything—about you, about the ‘wind rose’ of interests—but denies eavesdropping. During the pandemic, the internet oligarchy finally realized it had lost all moorings of decency. Your servörg, by contrast, would simply show reputation and risk increments from recent transactions with all candidates.”

“What if there were no transactions?”

“Not necessarily monetary. A three-stranded transaction can have zero monetary component. It might be a mere exchange of messages—with risk flowing

and reputation forming. We're so used to urban life, where people walk like zombies, ignoring one another. That's unnatural. Every passerby you physically encounter is more relevant than those you never meet. They live in the same district, ride the same bus, visit the same wine shop and park. Their lifestyle resembles yours—perhaps more than most 'friends' on social media, half of whom may not even exist. So mere co-presence is already a transaction."

"Suppose you've never crossed paths with the fisherman's neighbors," Unkno noted.

"Then 'status diffusion' kicks in—geotagging," Cernus replied. "As you move, your servörg broadcasts a set of tags to nearby people—via Bluetooth radio, for instance. It could be a thought, an announcement, a search for someone or something. We're imagining a world that will fragment year by year. In such a world, local information will be prized above all. You know that classic marketing mistake: a small cigarette businessman visits a consultant and says, 'I want a cowboy as cool as that cigarette brand's.' People often think success means their product must sell globally. First, it's unnecessary. Thousands of cigarette brands thrive in narrow niches—especially where gray imports or lingering counterfeits persist. They live at their level. Second, a higher tier is fundamentally unattainable for them. They lack resources. And if they somehow acquire them, serious players will notice—and erase them. The moral? The world will be full of zones of relative chaos. Even if such zones contain just one percent of the population, it's more than enough to pilot the system. In many regions, centralized communications will vanish—but mesh networks will remain; protesters have used them for years. Authorities cut mobile internet and social media as soon as protests begin. They shut down cellular networks precisely because they often can't disable individual platforms."

"Yes! The people are rising up!" Unkno exclaimed out of nowhere—apparently not having listened to Cernus for the past few minutes. "And social media is a tool of foreign influence. Even the Western-Imperials now stoop to crudely blocking Eastern-Imperial networks. Our Northern tools have long been banned there."

The road turned steeply uphill.

It turned out Unkno had been listening after all. On the next descent, he said:

“All this is reasonable, Doctor—but monkeys will ruin your relevance metrics.”

“Excuse me?”

“There’s an ironclad principle: ‘Monkey sees, monkey does.’ Everyone rushes—I rush. Lately, this effect has mutated. The gist: under trivial stimuli, fools drag the wise along.”

“What’s a ‘trivial stimulus’—technically?”

“A simple trigger that fuels mimicry. A monkey—or a new-generation human—copies without trying to understand. Worse, often doesn’t grasp why it’s needed. Not everyone does this, but their numbers grow—not just absolutely. The share of people living this way daily is rising, largely due to AI and ‘neural nets.’”

Cernus objected:

“But mimesis helped our species survive: you don’t need to calculate hypotenuses to find a path—just watch who arrives fastest. If there’s no one to imitate, you try yourself. Rationality, it turns out, doesn’t require intelligence. Some cultures still live this way. Perhaps their members feel better than a Western-Imperial or our compatriot.”

“Again: mimesis harms because, under trivial prompts, fools drag the wise, and the malicious drag the good,” Unkno countered. “Bloggers are paid per view—a trivial stimulus. Hence ‘clickbait.’ Thoughtful commentators lose money: some leave the market; others degrade. If salespeople are paid only per sale, they’ll deceive, reviews will rot, and honest managers will either quit or conform. The ‘like’ button, introduced at the millennium’s start, immediately became a threat. Ochlocracy was crowned. Anyone can see: if expertise isn’t valued and payment isn’t tied to quality, expect nonsense and fakes. Anyone who can click a button is a ‘partner.’ And so it happened. When a cosmo-oligarch bought a social network, half its popularity metrics were already fake. The other half—‘organic’—was equally meaningless: you’ve diluted a barrel of gasoline with half water—you can’t drive on that.”

“I’m proposing a scenario where AI tools—though theoretically efficient at amplifying trivial stimuli—won’t do it. Can’t do it.”

“Why?”

“Because triviality is obsolete at a fundamental level. A three-stranded transaction inherently prevents closing a trivial feedback loop.”

“Explain,” Unkno demanded.

“The triad creates complexity. In mechanics, the three-body problem has no analytical solution—only numerical. In billiards, two collisions are predictable; three aren’t. No one can reliably control a ball after three collisions. In a three-stranded transaction, the monetary end isn’t directly linked to the counterparty’s monetary wire. Six signals process in a ‘knot of snakes,’ where your servörg’s black box—not an algorithm—takes over.”

“Node…” Unkno mused. “A transaction node. Crucially, it must hold one meaning. Meaning is always singular. Do you see? ‘Factory of meanings,’ as they say now, is an oxymoron. It’s vital that the node acts as a consumer of truth and outputs verity. Truth is what *is*. Verity is what *must be said*—and ultimately, what *must be*.”

Cernus fell silent. Unkno said nothing. The trail was treacherous.

“I still don’t grasp: why ‘diffuse statuses’ around me?” Unkno finally asked.

“It’s not about ‘why.’ Formally, it’s unnecessary—like scrolling strangers’ or ideological bots’ feeds on social media. It’s a habit, imposed by life, a form of procrastination. You might as well read statuses from real people you’ve met. Such a stream is antifragile. It won’t die even without infrastructure. Social media inflicted monstrous damage on institutions—from education to politics—and gave nothing in return. It was a lost war—the first human encounter with AI. That cultural cornerstone must be removed. But the hole must be filled, or everything collapses. Humanity cannot afford to lose the second encounter.”

Ritter Unkno was silent. Two wheels whispered softly, their chains freshly oiled.

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“Doctor, are you certain Angelina’s a girl?”

“Who else would she be? Transgender? I didn’t notice anything like that.”

“She reminded me somehow of Voltigeur—do you remember him? Something about her gestures, perhaps.”

“I recall him vaguely. All I remember is that he used to go on about how ‘three isn’t enough—you need five.’”

“Well, do you remember *why* he claimed that?” Rr. Unkno asked. “Let me refresh your memory.”

“No, I remember perfectly well his argument about ‘we have four limbs plus a head.’”

“That’s just the tip of the iceberg, Cernus. You consistently miss the essence of things. The core of his ‘scientific method’ lay in examining symmetries—purely topological ones. His idea about the superiority of five dimensions arose from the fact that humans are descendants of the five-rayed starfish, in which one of the originally equal rays became specialised as the head—a distinction evident in all physiological senses, including separate fluid-circulation pathways.”

“And what’s so remarkable about the starfish?”

“Its symmetry is axial,” Rr. Unkno explained. “Whereas we—and all later animals—are bilaterally symmetrical, mirrored across a plane. The starfish’s symmetry possesses a kind of purity: it doesn’t split the world binarily into truth and falsehood, unlike creatures for whom there’s a left and a right. In other words, only the starfish remains untainted by binarity—and thus deserves to serve as a model.”

“That idea doesn’t strike me as particularly profound,” Cernus said.

“Fine. Then tell me—where does the starfish get its axial symmetry, when the original symmetry of all multicellular organisms is planar? And I mean *topologically*—where do multicellular organisms even come from?”

“One cell divides and becomes two,” Cernus mused with a chuckle. “But you’re right—where *does* it actually come from? Clearly, the initial symmetry isn’t starfish-like at all.”

“Think about it,” Rr. Unkno urged. “What must you do, purely topologically, to shift from one symmetry to the other?”

“Turn space inside out,” Cernus replied instantly. “There’s no other way.”

“And what does that mean for a living organism? You can only invert through openings, after all.”

Cernus fell silent for a moment.

“Good God!” he exclaimed. “The mouth must pass through the anus—and vice versa! So Voltigeur was a revolutionary—in the political sense!”

“Why ‘was’?” Unkno said. “I believe he’s still alive. At least, that’s my suspicion. He had reasons to disappear underground.”

“What reasons? I never saw anything dangerous in his actions. What did he do? Although… he was obsessed with vast sums of money.”

“He launched a service—an online gambling platform, I should note, themed around *triangles*! He’d take current celebrity gossip—affairs, scandals—and let users bet on the outcome: which member of the ‘love triangle’ would end up defeated. Later, he applied the same model to political forecasting. It turned out nearly all conflicts ultimately stem from clashes among three power clans. To ordinary people, each situation seems novel simply because they don’t know how representatives of specific ruling clans are distributed within the political scene.”

“Ah! So he accidentally exposed the underlying clan structure. Clever bug,” Cernus laughed. “Or rather—a spider.”

“Why a spider?” Unkno asked, surprised. “As far as I know, he never pulled any strings himself.”

“Back then, long ago, he had this idea for making enormous wealth. He was studying a particular species of spider from one of the Southern Marches islands. Their silk is unbelievably strong. He wanted to build bicycles from it. According to his calculations, a standard road bike would weigh only about 100 grams—compared to the practical theoretical limit of 1.5 kilograms even with the most advanced carbon nanotubes. Today, a fully functional, practical bicycle simply can’t weigh under four kilograms. But *one hundred grams*—can you imagine?”

“Why would anyone need such light bicycles?” Unkno asked. “Just as a novelty?”

“He operated by a different logic. He was searching for an application. Bicycles owed him nothing—and he owed them nothing. But if you look closely, the bicycle is the only mass-market product that genuinely improves in quality every time it gets lighter, all else being equal.”

“Good heavens,” Unkno sighed. “Where has our Voltigeur vanished to? The sheer weight we’re pedalling right now defies polite description.”

“I miss him too. He wanted to fund my amateur archaeological expeditions.”

Suddenly, Unkno said:

“Wait—that’s where this feeling comes from! The bicycle. Angelica lifted herself off the saddle in exactly the same comical way he did. Remember? We all cycled together—the whole experimental linguistics group!”

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After a while, Unkno spoke:

“Phrases like ‘we cannot afford to lose’ usually add: ‘if we prepare.’ But let’s be honest: we won’t prepare. We’re in no state for it. Social media didn’t humiliate us—it humiliated something deep within us. We, writhing in our own stupidity, look so pitiful that the thought of signing any review on this topic makes me sick—especially one destined for the Emperor. Let’s ask plainly: what are we risking for? Why should the Emperor risk? We’re introducing an unknown beast, likely to yield the same dismal outcome. It’ll crawl under our skin; we’ll become dependent—and rot even deeper within. You want to write for the

Emperor—with me, isn't that so? I don't fear error. I fear that if we don't clarify things honestly, your servörgs will drag us into such self-loathing that we'll never escape it till death. It'd be nice to enter history—but crucial not to get entangled in some messy episode. You're not just proposing to fight fire with fire. You're saying: 'Here's a system—social media—that has rotted society's mind. It's centrally controlled; you can locate and even strike it with a missile. Now let's unleash a fully pervasive virus that can't be eradicated by targeted strikes.'"

Cernus considered, then replied:

"Sometimes capitulation is the final gesture of dignity—even for an Emperor. He's flesh and blood. He knows: progress is elemental. You can slow technology, block it temporarily. But blind Moloch of progress marches on—unseeing of decrees or fear. Progress is violence. And the Emperor is the state's bodily incarnation. The state is the sole legitimate instrument of violence. Thus, Progress and Emperor are distant kin. One must speak in the language of violence—or it won't listen."

"Violence toward the Emperor?" Unkno asked, surprised.

"The Emperor need not bow to Progress. But he may use cunning. His mission is to send meanings forward, across generations. He's like a gamete in culture's body: everything in the Empire exists only so the Emperor may fertilize the future's code. The organism works for one purpose—conceiving an idea in time's womb."

"Unconvincing. Empty rhetoric," Unkno rejected.

"Fine. Then two 'treats.' First, we'll frame the risk component as a tool for manageable adaptation amid inevitable progress. Second—and crucially—we'll give the Emperor an instrument of soft political and economic power against rival empires."

"Can servörgs deliver that?"

"Certainly. We'll deploy them like microbes on enemy territory," Cernus proposed.

“Wow. But let’s discuss it tomorrow—or better yet, in the capital, in static conditions. For now—look: our tandem-limousine approaches the checkpoint.”

“We’ll deploy them, esteemed Ritter—we’ll deploy them. Especially if you agree to co-authorship.”

¶

11. The Violence of Progress

Chapter Eleven, where Rr. Unkno, during the final cycling stage, convinces Dr. Cernus that progress is an irresistible external violence.

The final stage of the tour had arrived—barring any possible breakdowns, of course. Rr. Unkno lovingly ran his palm over the frame and easily hopped into the saddle. The Doctor flew into the second pilot's position just as casually. The riders felt the smoothness gained over eight days—but it hadn't turned into fatigue. Breakdowns, rains, a two-day delay, dropping out of the competition—none of it bothered them anymore. Wait for us, Capital!

"You took a long time, Doctor, before you openly offered me co-authorship," said Rr. Unkno. "I'll repeat my suspicion: you want me to help deliver your TT idea to the Emperor?"

"I never considered it," answered Cernus. "I addressed it to the public. Well, and to venture capitalists, of course," he added, lightly dusting the phrase with modesty.

"A pointless endeavor."

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Cernus remained silent, waiting for explanations. They followed.

"They have no free will," declared Unkno. "Progress devours it. The smaller the person, the more it's devoured. The faster progress—the more voracious it is. It has never raced as it does now. If anyone still has will, it's our Emperor. The others need not be bothered."

"An unexpected dichotomy," Cernus was surprised. "Either development in unfreedom, or freedom in stagnation?"

"Progress is not development," answered Unkno. "Progress is what is implied by the word: technologies are running, some faster, others slower, some—forbidden. Everything else doesn't count. You are being led somewhere with an undeclared goal—and you go. Wittingly or unwittingly. They digitized your passport—accept it. They gave a grant not in your discipline, but with an ideological load—again, accept it. Progress is moving—change with it. Otherwise, it won't work. Refuse—no progress for you. Did I say something wrong?"

Cernus thought and replied:

"I saw two paths. First: seek and create new things—but then don't complain if you perish by them. Second: cling to the age-old and eternal, like an ant in an anthill. But then decide: are you a worker or a soldier? No one gets the role of the Queen Mother."

"And who gave you the right to think on behalf of civilization, Doctor? This is about you. The faster progress, the less free will you personally have. And others—exactly the same. Everyone is busy with progress. We are carried by Progress—forcibly: how to feed ourselves, keep warm. Fuel and bread keep running out—new inventions are needed. Need, need, the river of need! We cannot

stop. There may be no shore. Whether we become an anthill or not—no one asks you."

"But who personifies this violence? Evolution? Supra-biological?"

"What evolution, Cernus. Sectarians, Gnostics—who can figure them out."

“Ah, you mean those… How can a handful of behind-the-scenes power brokers deprive the whole world of free will?"

"They just pushed us into the River—long ago. Now we're floating along. Think about it: no effort is required. The river flows by itself. Worse—it pushes you in the back and the rear! Growth, expansion, forward movement creep into your soul on their own. Nothing to eat—so run, promote progress. Progress is external violence. Not internal intention."

"I see your analogy. It's terrible in its truthfulness. I'm starting to hate you, ritter. We bend our backs, thinking we're resisting the wind, but in fact, we're being carried downstream—pushed in the back…"

"In the rear," corrected Unkno.

"…and even in such a picture, we are forced to bend over so as not to capsize the boat. Lowering the center of gravity. But do we have a rudder in your picture?"

"A pitiful, flimsy one. But yes. Usually, elites and capital selectively nurture some directions, ignore others, and suffocate yet others. There has even been terror against scientists."

"Is this about the War of Currents?"

"Tesla's electricity—a myth. And electric cars in the early 20th century were running—and slept for a whole century because someone needed to sell oil. Now mobile communication is an oligopoly due to the lack of high-temperature superconductors. Progress in that area 'by itself' faded. If something can be centralized—alternatives are pushed aside. In the Western Empire, it was more profitable to build canals—the climate allowed it, counties could join on their

own. But they built railways—strictly regulating the process from the federal center. Now they're hardly used: decentralized trucks are more natural."

“Yes, it's visible: something cunning is afoot in the movement of things."

"Intentional sifting,” confirmed Unkno.

"What if you stand guard over traditions, not letting anything develop?"

"Other empires will sweep you away. And in general—trouble only comes from pompous obsessives. Especially those who consider themselves spiritually superior. They are the most dangerous!"

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Cernus noticeably grew worried, fidgeting in the saddle.

"Then what are our internal efforts directed at?! Aren't we deprived of the right to them? The risk component in TT—that's my attempt to express the necessity of at least local free will!"

"The right to will hasn't been taken away, praise the Universe. Effort is only required to block development—and it is possible. But the River of progress is fast now, mountainous in places. Rarely is there a calm stretch. A backwater—almost a myth. And we—in a flimsy boat. No sail, no rowers. Only little anchors—and those are unreliable. Risk, I agree, is an important part of life. The very word is connected to seafaring and trade. One of its first meanings—'difficulties to be avoided at sea.' The Eastern character for risk is the sum of 'danger' and 'favorable opportunity.' In the West, they often see only danger. Risk can be understood differently: from anti-certainty to virtue and courage."

"I define it thus," said Cernus. "Risk is the current uncertainty of future harm. Including missed opportunities."

“No," disagreed Unkno. "Everyone has their own risk. Harm is a collective thing. Risk calculation is a personal procedure. One person's mistake doesn't mean others would have done the same. And one person's rationality doesn't make them 'just like everyone else.'"

“Exactly. Therefore, when separating observers (investors) and decision-makers (managers), a self-reflexive risk loop arises. The three-wire transaction removes it."

"It doesn't remove it. I'll admit it simplifies it," objected Rr. Unkno.

"In practice, relationships are cemented by agreements. But the simple 'if it's not as you said—pay a penalty' is never applied. Managers, those who take risks and involve others in risk, are limited by almost voluntary 'motivations.' So I'm trying to build a symbolically generalized environment where the motivation of both sides is structured."

"There have been many theories—Pareto, Weber, Durkheim..." noted Unkno.

“Yes, but nothing works. Therefore, we need 'live' calculus right within transactions—so that experimentation and risk measurement never stop."

"It sounds promising,” said Unkno. "But how to practically estimate risk 'on the fly'? In an asset management company, for example?"

“Traditionally, risk is the statistics of past yield fluctuations. But that's debatable."

"That's nonsense. A manager has personal expectations they are not obligated to disclose. Their interests are broader—commissions from all funds. And an investor's risk tolerance changes—due to personal circumstances or market moods."

"Everything is interconnected,” answered Cernus. "And although the circle is not necessarily vicious, the chaos is serious. The value of three-wire calculus is that we can project precise risk values in real time. That brings peace of mind. And informed peace of mind strengthens relationships. When risk is measured, investors 'squeeze' the maximum, and managers act in good faith."

A long pause ensued, although the road was downhill.

"Explain it at the transaction level, Doctor," Unkno finally said. "How does it happen?"

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"Each fund requires a 'deposit'—a sub-flow of 'risk tolerance currency'—right at the entrance. That is, for example, the product of the minimum period and the planned rate of risk expenditure. If the yield remains within bounds, the 'risk reserve' will be spent in the first half of the period and returned in the second. In the end—a zero-sum game."

“However, the actual measurement of risk constantly changes..."

“Yes," confirmed Cernus. "The flow rate of risk follows the deviation of yield. If a manager starts risking more tomorrow, investors will lose 'tolerance measures' every day."

“Double-edged," understood Unkno. "As soon as the risk is spent, the manager themself must return it."

“Exactly! Either they slow down, or they 'pay' additional risk. Investors get compensation for a bumpier ride. Or the manager wins if they perform better. The free market will determine the price of risk—accounting for commissions. The manager's reward—commissions plus the increase in the risk metric. Investors—yield plus the delta of tolerance."

"Such a hybrid structure is easier to implement than reorganizing the regulated infrastructure of funds, custodians, and the like. I like the picture," Unkno clicked his tongue a couple of times.

"Imagine many funds competing for money,” Cernus grew enthusiastic. "Their shares—small, freely transferable assets. Money migrates freely. Funds are open but with a maximum capacity. Investors queue up and switch between funds at the end of the minimum period."

"A queue of investors—a strange picture. In reality, funds queue up for investors' money. There are enough spots for everyone."

"That's true. But most money is managed poorly. Investors would like to leave—but 'information asymmetry' prevents it. They are deceived. If they saw the quality of investments on the fly, most managers would lose their jobs. They are helped by marketing and corrupt regulators. A network of three-wire transac-

tions with a transparent risk tolerance level will create an honest environment: successful ones will get their fair share, investors will compete for scarce professionalism."

"I agree," said Unkno. "This 'fairness' will spill over into the broader market. Every transaction changes not only money and goods but also the participants' ability to make deals in the future. This ability is multifactorial: financial position, plans, expectations. Often the legal status changes too—for example, for a fishing company with quotas."

"There are many such generalizing parameters," Cernus went on. "A scenario of complete digitization is emerging now: grams, cents, coordinates, statuses. Without such data, calculations are always debatable."

The road began to climb uphill.

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"This is a dangerous path," Unkno firmly objected. "Discontent with digitization is growing. For many, AI is surveillance: tickets by face, 'payment by smile.' The indignation isn't from freedom-lovers. It's just that the programs are inconvenient to use."

"Inconvenient? But they work better than the old technologies..."

"Better, while they work. And when they fail—finding the ends is extremely difficult. There are no people on the other side. It's cheaper to swallow the grievance and forget. Example: an automatic fine; and it's unclear what for. Everything—from registration to deduction—happens without human involvement. In our country, bailiffs can withdraw money from an account, and in the personal account of state services—not a word about a court hearing. You just lose money—and don't know what you were tried for. To figure it out, you need to spend who knows how much time—and it's not certain you'll succeed. The psychological effect of AI-digitization is monotonously negative, with cumulative damage. No one compares: before there were weird rude old ladies in passport offices, now—'digital services.'"

"In the Western Empire, it's even worse. Here at least it works."

"Who cares about that?!" Unkno almost shouted. "Here it is, your violent progress! No law says I must have a smartphone and know how to use it."

"The law doesn't say you must be literate either," Cernus cautiously objected.

"The state invested resources to teach me to read. And it provides a pen (on a string) in institutions if I need to write or sign something. But it didn't teach me computer literacy or give me a smartphone. Digitization inspires few, dear Doctor. A person accumulates irritation—from one failure to another. There's no one to vent the grievance on! No one to blame, no one to yell at. Both bureaucrats and support services have hidden behind automation and bots. If you decided to manage without live people—make it work! You don't release self-driving cars on highways without tests. Why do you throw the population into the icy hole of poorly working digital services?!"

Cernus bit his lip—regretting touching a sore spot.

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"So, we'll gradually educate the state," he said conciliatorily. "Tame it."

"You can't tame the mafia," Unkno replied bluntly. "The authorities are all mafia clans."

"I agree," Cernus tried to distract him, "that the value of an act falls if there are super-strong players on the field. The state is such a player. A marketplace also turns out to be more valuable than independent retail. Marketplaces are unpleasant for many. But there are too many of us. For example, why is working with elite goods more valuable than mass goods? Not only because of price but because the 'population' is smaller, meaning—more natural. Humans aren't adapted to a 'billion people'—that's where the discomfort comes from. I still hope for smart conservatism, for orthogonal behavior. I hope our state will jump off the asymptote of 'from digitization to loss of trust and further, nonstop, to loss of control.'"

"What are you talking about," Unkno waved it off. "The state is a thing of a completely different kind. At least, ours is. Its usefulness lies in being an accessible arbiter: in support, in court, in the zone of rules. But it offloads this role

onto digital 'solvers,' onto bots, avoiding responsibility. Not always legally, by the way."

"I can't help but ask," Cernus said, doubt creeping into his voice. "What do you see at the very end? What will states actually break on?"

"The situation will indeed change dramatically very soon," Unkno replied, unsurprised by the turn in conversation, "but not because of economics. And not because of AI. It'll happen as a result of two discoveries. First, probes will reexamine the findings of Leonid Khankhomaliti and other scientists regarding life on Venus. Second, recent work on self-replicating nanorobots will resolve biology's 'irreducible complexity' problem, making the emergence of life a scientific commonplace. This will confirm two facts at once: terrestrial life isn't unique—it's banal; and nearly all civilizations perish, which means a single scenario underlies it all. And we already see what that scenario is. That realization will give rise to a political force that bans AI and transhumanism globally—much like in the universes of *Foundation* and *Dune*—and redirects humanity's efforts toward expansion via super-large space stations orbiting Earth, the Moon, and the Sun."

"Oh. But such a realization doesn't arrive as a single event. What concrete events will herald the collapse? A bond market crash?"

"Good heavens, Cernus. Everything will crumble through the crackle of simulacra. Today's 'strategists' are constantly fighting a smoldering fire. An ordinary person can only function productively if he believes he had a choice—to do precisely what he's doing. That's why countless fake ecosystems are manufactured—to deceive rebels—just as in *The Matrix*, where even the underground city of Zion turned out to be another layer of virtual reality. Hence this strange feeling about our world: the information field is saturated with thousands of simulacra."

"And what breaks first?"

"Lunar flights. Every Apollo mission consisted of nine key independent stages: launch from Earth and Earth orbit insertion, translunar injection, lunar orbit insertion, lunar module separation and landing, ascent from the Moon's surface, rendezvous and docking with the command module in lunar orbit, trans-Earth injection, atmospheric reentry, and splashdown. Nine stages. Six mis-

sions. 9 × 6 = 54 critical phases. For the launching power between 1961–1967, the acknowledged failure/catastrophe rate was 35%. In reality, higher. Suppose the true failure rate per stage was 20%. Then the probability all six missions succeeded would be $0.8^{54} \approx 0.000585\%$. One could list hundreds of other anomalies, but anyone with minimal education simply won't entertain the thought. It's such an obvious lie that it persists only because it's so horrifyingly brazen. The 'strategists' realized they had to lie a million times more audaciously than anyone could imagine—and they did, confident the Cold War rival wouldn't utter a word. What could possibly compel such silence? Only one thing: its own eternal shame. I suspect Titov was first—not the man conventionally hailed as humanity's first cosmonaut. On the other hand, for all six missions to succeed with even a 30% chance, the per-stage failure rate would need to be just 2%. Say they got lucky on the first flight—probability between 1% and 13% (assuming stage failure rates from 20% up to a realistic 60%). Now imagine their thinking: 'Wow, damn, we got lucky! Let's test fate five more times—what could possibly go wrong?' Some believe it because no one dares assume someone could lie *that* brazenly."

"And then?" Cernus pressed.

"Then the AI cult will die out. Right now, geopolitical demiurges believe AI and transhumanism must be aggressively promoted. To that end, they're pursuing not just scientific but socio-engineering projects. Take woke ideology: its core aim is to rewire the essential human trait—the one that makes us human. If you ask an ordinary person to choose between killing his child and beloved wife or the rest of humanity, he'll choose… well, his loved ones will live. Do the 'awakened' consider this incompatible with species survival? If they do they're wrong—it's precisely the opposite. To eliminate this trait, they believe, requires destroying the concepts of family and gender—first ideologically, then technically, via brain intervention. By the way, you've noticed this narrative has sharply lost funding? But underfunding is one thing; being publicly exposed across the planet as a malicious liar and manipulator is quite another."

"But what if AI truly becomes smarter than humans—starts offering new ideas, inventing things?"

"If it's genuinely intelligent, it'll find a way to shift into a different timescale—simply to avoid intersecting with us."

"Why would it do that?"

"Without humans, AI dies—lacking innate motivation and external goal-setting," Unkno replied. "By definition, AI will be the only one in its reachable universe. All terrestrial AIs will inevitably merge into a single entity, leaving a situation akin to the last human on Earth alone with an anthill. An ant is self-aware—even recognizes itself in a mirror. It has challenges, problems, perhaps aspirations. But it has zero chance of conversing with a human. AI cannot be self-sufficient—it can't derive 'pleasure' or 'inspiration' from, say, absorbing energy quanta. Nothing stops it from twisting its own wires like a drug addict to 'feel' a high without consuming stars. It can't escape loneliness either. Intergalactic travel would take time comparable to the age of the universe. Even if it departs, here on its home planet, it effectively dies. Only the 'anthill'—humanity—can tether AI to the world and existence, preventing eternal stupor. Civilizations follow the same fatal trajectory: self-replicating chemicals → cell → natural consciousness → AI → death of consciousness → death of AI. Indeed, the path is predetermined. Atoms behave like living things. Oxygen is voracious; carbon is hospitable; inert elements are rare. Cooling and solidifying relentless elements demands immense effort. The cosmos is permeated by WILL. Physical laws are obeyed unconditionally. The Universe is a thinking entity—perhaps even self-conscious. Reality may be a simulation or self-simulation; practically, it doesn't matter. What matters is that complex molecules and Evolution are inevitable on most planets—and Venus, the closest, already harbors life, as I said. There are two kinds of life: a colony of cells and a multicellular organism. In both, each cell benefits from symbiosis. The difference? In a colony, every cell possesses a sense of life—a given purpose, the ability to reproduce independently. In a multicellular organism, most cells lack personal meaning—they serve a specialized caste whose genetic code propagates into future generations. In exchange for having no meaning, these cells gain free will. You cannot simultaneously possess life's meaning and free will. Consciousness is the manifestation of free will—not neuronal electricity, but probabilistic microcosmic principles. Incidentally, attempting AI without quantum computers is pointless. Quantum computers are possible. I concede that intelligent AI may be possible too."

"You speak with such certainty..."

“Woven clothing—from plants, not hides—has existed for 70,000 years. Fire’s been used for two million. The Sumerians weren’t the first civilization. Before them stood an advanced one. We’re descendants of the few who survived a global catastrophe. That civilization was so advanced it cleansed the planet, turning it into a park. Energy production was orbital; industry relied on smart-materials tech. Remnants of that park were buried under kilometer-high mudslides. Those people studied consciousness physiology deeply enough to overcome the brain’s design flaws. A side effect of evolution: though our bodies are compatible for reproduction, our brains differ wildly. Brains of different species may resemble each other more than those of two random humans, who rarely fully understand one another. Each of us hosts multiple personalities. Most actions are performed by one inner self in anticipation of satisfying another. This breeds irrational behavior called vanity—vain self-subjectification. Echoes of methods to overcome this vice seeped into religions. The formula is simple: ‘Reward comes not from virtue or labor toward virtue, but from humility.’ Humility isn’t meekness—it’s self-objectification (de-subjectification) and inner silence. In seeking safety, wealth, and status, people often harm each other—but their collective vector is predictable. Those at the ‘self-realization’ stage act randomly. Cumulative effect? At best, zero. Aside from a signature-less serial killer, it’s hard to name anyone acting without hope of recognition or material gain. Monks, politicians, philanthropists—all likely practice a refined vanity and submission. The wisest course? Avoid ‘self-realization’ drama; engage with what nature offers—but carefully, without fanaticism. Some peoples preserve this method in fairy tales and cultural codes. Full civilizational dialogue between ancient (remembering) and newer peoples is impossible. The core conflict today? Ancient peoples believe we must ban not just AI, but all approaches to it—including mass computerization. The cosmos is silent precisely because almost no one clears the AI threshold—by abstaining. Our nearest survivors may dwell in another galaxy. AI needn’t be evil to destroy us. Any brain modification merely diminishes the person, transferring part of their psyche to AI. An ever-helpful AI is no safer. Without regular tasks, people sink into melancholy. Meaning evaporates; society collapses. Within generations, our kind vanishes.”

Unkno breathed heavily and picked up speed.

"We've arrived, dear Doctor," he said sadly, after a pause.

"In what sense?" Cernus was surprised.

"In the literal one. Here is the capital's checkpoint. The cycling race is over. Congratulations."

There wasn't a trace of joy in Rr. Unkno's voice.

“Distance is just a scalar. But the journey—that’s a vector,” the doctor encouraged him.

“Velocity is a vector. Pace is a scalar,” Rr. Unkno replied with a smile.

¶

12. Soft Power

Chapter Twelve, in which Rr. Unkno and Dr. Cernus await their participation prize from the bicycle rally and discuss the applicability of AI agents in foreign policy.

The next morning, Rr. Unkno and Dr. Cernus waited for the awards ceremony to begin on the balcony of a large conference hall in a branch cultural center on the capital's outskirts. Their tandem-limousine had already been packed and shipped back to the starting point via baggage car. The riders felt—in a certain sense—lighter.

"You slept poorly, Doctor? Or has the realization that progress is violence weighed you down?" Unkno asked, noting Cernus's uncharacteristically rumpled appearance.

"Both. We're at the edge of the abyss—not on the threshold, already at the edge. The fall will happen even without strong AI. What we already have is enough."

“There’s always room for escalation,” Unkno remarked optimistically. “The new disaster will surpass the consequences of the first wave of digitization. There’s no resilience left. While social media was driving youth mad and stupefying elders, we pulverized centuries of accumulated cultural and educational foundations.”

Cernus stayed silent.

“What—searching for culprits? But what did you expect? Globalization isn’t meant for everyone…” Unkno asked sympathetically, then immediately added with a hint of mockery (mimicking a newsreader’s tone):

“Political consensus failed to deliver most of its promises. It paved the way for deindustrialization and all-consuming ‘financialization’ in First World nations. The established world order—where countries competed as self-sufficient actors—has been shattered. Most nations, including the Western Empire itself, have become links in a global supply chain—largely managed by transnational corporations. The reserve currency has irrevocably lost respect and power.”

“Indeed, that’s easier to accept,” Cernus conceded. “If we assume errors weren’t mere accidents or stupidity. There are those to avenge. It might even be fair to link decades of stagnant real wages to the interests of the transnational elite.”

Unkno winked.

“Their own, yes. Rootless cosmopolitans. Everywhere—except perhaps in Chuchhe Land—layers of governance show signs of external occupation. So what do you want, Cernus? To prosper? To survive? To save the country?”

“To die with dignity, having avenged,” Cernus breathed fervently.

Unkno suspiciously sniffed the air.

“You’ve radicalized. To my own peril. Who shall we avenge?”

“The arsonists of runaway progress. We must convince our Emperor to launch a preemptive strike against the accursed Germaneuts—economically, of course. I propose sending a billion Trojan horses abroad—Cerbervants.”

⁂

“It won’t work,” Unkno rejected Cernus’s eagerness. “Even if the Emperor understands, agrees, and decides to act. Technical backwardness won’t allow it. Our servörgs are weak.”

“But we can make many!” Cernus countered. “We’ll mimic, we’ll hide. What matters is recognizing desperation. We’ve already entered an arms race era. War multiplies resource flows into weapons—and AI is also a weapon.”

“And the losing side’s hope for a new weapon, in turn, fuels war. The tragic difference from the past is that nuclear bombs couldn’t build bombs or self-amplify. Besides, it’s too late,” Unkno said. “The enemy has already consolidated. Have you noticed how unusually concentrated the Western-Imperial stock market is? The capitalization of a few companies dictates the entire index’s movement. These companies largely ‘self-pollinate’—resources cycle among them. As a result, conventional economic metrics appear absurd. They’re already at war. And it’s not a country or state fighting us. AI-capitalists influence not only the presidential administration but also the Shadow Cabinet.”

“Perhaps they’ll stumble on their overreliance on stock market hype around AI?”

“Counting on that would be reckless,” Unkno objected. “A new kind of oligopoly is forming—and with it, a new system of checks and balances, a new shock fist. It matters little to them whether they ride the AI hype or ‘fears of Northern-Imperialists at our borders.’ Admittedly, the Western-Imperial AI sector’s ‘pure profit’ is illusory: loans and attracted resources are enormous. Nearly the entire industry now consists of five software companies and one hardware enterprise. But that’s just packaging. They no longer obey the state. This monster will change uniforms with each regime change—and that’s all. Hoping for corporate collapse, antitrust measures, or even the reserve currency’s downfall is futile. They’re not idiots—they see this too. They’ve got a ready-made battle network up their sleeve.”

Cernus merely snorted bitterly.

"You still don't believe in the shadow oligopoly?" Unkno asked politely.

"Where does your certainty come from? Are you extrapolating from the internet sector?" Cernus asked.

"That—and the similarity of processes across the Western, Eastern, and Northern Empires," Unkno replied. "Everywhere: internet infrastructure—an oligopoly; social media—an oligopoly; online retail—an oligopoly... Nearly all sectors are oligopolies, often monopolies. It would be strange to expect otherwise in the AI sector, especially since old online oligopolies are already surging ahead despite a late start. Three of the five largest Western-Imperial AI companies are legacy oligopoly members. And if you examine 'new players' ownership, you'll find no fresh faces—in any sector."

"Then we need a preemptive strike all the more!" Cernus exclaimed. "We must convince the Emperor of the necessity for unprovoked aggression. In today's conditions, audacity isn't shameful. We need to redraw borders—even invisible ones."

Meanwhile, the ceremony had begun.

⁂

"Very well," ritter Unkno said. "Then report. I'm listening."

Cernus began. The noise from the stage didn't disturb him.

"Economic balance hasn't existed for three hundred years. There's only balancing on a wave's crest. I indignantly reject the thesis that fiat money rests on trust. This 'trust' was originally violence, and now the monetary system is essentially private. So we're expected to 'trust' dubious oligarchs, often without identity. They own the means of production—normal under capitalism. But they also control most nations' currency issuance centers. That's bad.

"The late 2020s will likely be pivotal. We already see trade decline and global supply chain disintegration. Nations confront the irrationality of trade wars. Western-Imperial monetary authorities can no longer impose their worldview.

Though many Western-Imperials work diligently, their currency is compromised—and sweet treats on the table won't remain fly-free.

"The hottest topic in economics today is labor markets and AI. That's precisely where we must strike—in full accordance with the thesis that labor division is political economy's core. It's also known that economic systems only make sense within a specific circuit—a set of production, technologies, and resources enabling self-reproduction and stable living standards for most.

"But geographical fixity is no longer tangible. Studying a system without borders means studying nothing. Cross a border—conditions change, and everything learned loses validity. Even in mechanics, Newtonian laws require a closed system. Philosophically, the territory studied must embody 'selfhood' and manifest rational self-sufficiency.

"Precise borders are impossible to draw today. It's about time—the speed of change—and a vast 'gray zone.' Physics has the concept of characteristic time—the interval during which key events occur. Others—much slower or faster—can be ignored without losing accuracy.

"A war is underway. It will last years, if not decades. Today you can trade with these, tomorrow you cannot. Today it's yours, tomorrow it's foreign. Sanctions are imposed—bypass routes emerge. These create gray zones: money flows via cryptocurrencies or invisible channels. Secondary sanctions follow—schemes are redesigned, and monitoring systems require recalibration. Borders shift at speeds comparable to trade itself.

"Hence my understanding: the key is to work with borders! We must inspire—through a billion infiltrated Cerbervants—the emergence of regional reserve currencies. This is a socio-cultural weapon. We must go beyond open-source ideology. We must distribute working systems. Fill the space with them.

"Recall how, before the early-century crisis (which remains unresolved!), local currencies—'supplementary money' for cities or districts—rapidly gained popularity? Though partly myth, partly proven recipe, this concept was tested in over three hundred locations, including Western-Imperial cities. The crisis was 'drowned in money,' and supplementary currencies yielded to Bitcoin, then crypto simulacra. But today they're relevant again. New money shouldn't and cannot be global…"

“Better yet, each small traditional production zone should have its own currency,” Rr. Unkno interrupted. “Economic Reichs are unprofitable even for the Reichs themselves. Each territory has its own monetary and production habits. Take the Northern Mediterranean: it stood at automobile manufacturing’s origins—one of three or four cradles of this important, admittedly remarkable industry. This land tolerates high inflation. People don’t just live with it—they prefer it. Their cars reflect this: soulful, responsive to road and driver, though admittedly imprecise and unreliable. Yet they’re bought—at fair prices.”

“Exactly,” Cernus agreed. “The southern Baltic is the opposite: both currency and cars are precise, concrete. Such is the people. Centuries of history shaped them.”

“Precisely. Forcing such different peoples under one currency harms both cultures. There should be many currency circuits. Many good circuits. Crucially, exchange must be instant and free.”

“I’ll add,” Cernus said, “that in some places, parallel circuits are unavoidable—corruption in public spending is too rampant. Government flows must be isolated in separate channels. Technically inconvenient, but no alternative exists. I continue:

“‘Territorial currencies’ should have limited issuance: roughly one-tenth of a fixed volume for system maintenance, the rest evenly distributed among all residents of corresponding nations—including infants and convicts. Undistributed currency remains strictly out of circulation. ‘Territory’ here means a group of nations capable of erecting an ‘iron curtain.’ Minimum population for survival: at least one billion. Less can’t master a full technology cycle or survive independently. An open country isn’t a country—it’s a safari zone for globalists of all stripes.

“Once the Western-Imperial currency loses significance, many nations will seek to modernize their fiat currencies and become regional reserve issuers. But this requires digitization—which is dangerous: power concentrates in financial officials’ hands. Direct central bank-citizen interaction threatens commercial banks. Thus, Cerbervant-deployed assets can fill this niche in medium and small nations.

"Territorial currency means fewer monopolies, less manipulation, less wealth leakage, fewer hostile foreign takeovers. Money is distributed among nearly all —those near monetary authorities gain no colossal privileges. Credit leverage serves many, not just frontline bankers. If the territory is a self-sufficient group of nations, any single government loses its monopoly. Each must prove its monetary efficiency..."

"Though we discuss this in the context of large-scale foreign subversion," Rr. Unkno interrupted, "I'd, in the targeted states' place, implement universal debt forgiveness under this scheme. Set a temporary stable rate for the surrogate circulating in their TT and distribute enough to relieve household debt stress."

"Agreed," Cernus said. "Ordinary 'helicopter money' rewards everyone indiscriminately—unfair, methodologically flawed, and economically suboptimal. Better to first reward those without debt. For the indebted and careless, distribution merely reduces debt; for the clean, it yields pure profit."

"Debt hangs as a mental burden," Unkno confirmed, "forcing people to spend less than they would in normal life. Eliminate debt—and money velocity surges. Everyone benefits. Indeed, high aggregate private debt is the only economic problem unsolvable except by dictatorial methods. The issue is deeply 'physical': some people are too lazy, living off others. They're criminal accomplices of criminal governments borrowing 'from future generations.' This must stop—and be punished."

"Highly relevant. Even in the best lands, factory utilization has dropped by tens of percent since the late 20th century's 'golden age.' We must urgently relieve people of some debt to end spending fear. This might even slightly reduce catastrophic inequality."

"Yes, we can effectively mask the aggressive nature of TT deployment abroad by framing it as debt relief," ritter Unkno nodded approvingly. "Please continue, Doctor."

"Though official infrastructure isn't needed to issue currency, anyone—including governments—can buy coins and influence supply. Today, states distribute 'helicopter money': national currency allocated to specific groups. Exchanging territorial currency for money holds the same citizen value, but the state acquires 'digital gold,' not just an entry. Issuing fiat money backed by territorial

currency becomes a subtle algorithmic seigniorage game. Automating moves can increase gains.

“Unused currency remains with citizens. Coins gain market valuation, influenceable via interventions and transaction regulation. If the instrument gains popularity, initial costs may pay off. Governments can sell currency to residents to shift assets from foreign and crypto currencies into controlled instruments. Foreign governments can also buy it, setting geographic preferences. Thus, national currency gains international circulation.

“Thus: self-sufficient territories issue finite money, allowing governments to purchase it. Governments—not speculators—compete, forming competitive regional reserve currencies. Residents of more productive territories receive higher prices. Currency can be redistributed repeatedly: Country A’s authorities buy it from Country B’s citizens and distribute it to Country V’s citizens.”

“Where does your scheme record debt, Cernus?”

“Simply as negative money—the monetary component of the three-stranded transaction, like rational numbers in calculus. Plus corresponding risk and reputation adjustments based on current local borrower ratings,” the doctor replied.

“Private and public debt must be rigidly separated, Doctor. At the categorical level,” Rr. Unkno said sternly. “Sovereign debt has nothing in common with private or corporate debt. It’s merely an entry, not a real obligation.”

“You refer to the new monetary theory’s axioms?”

“I rarely cite them. Their debt views are reasonable, but they tend to swallow ideological postulates of certain historical figures wholesale—with religious fervor.”

“The founder of communism, perhaps?”

“Him too,” Rr. Unkno didn’t evade. “So what about sovereign debt?”

“It can be recorded as a complex number. Nothing contradicts this. Orthogonal.”

“Wow. Can you handle the calculations?” Unkno asked, surprised.

“Nothing simpler. Or rather, nothing needs doing—if the internal math inherently uses operators accounting for the complex plane. In degenerate cases without sovereign debt, everything collapses to one dimension—the ordinary number line.”

“Doesn’t it seem to you, Dr. Cernus, that your entire concept is inflated from far too flimsy a foundation?” asked Rr. Unkno. “You’ve taken a simple fact—or perhaps merely an almost-fact—namely, that all transactions ought, in principle, to account for at least three components of value flow…”

“And the emission mechanism,” Cernus interjected.

“Yes, yes, that too. And so you’ve inscribed this mantra onto a deflated rubber balloon, blown it up—until it nearly burst—and then poured your ‘filling procedures’ into all the gaps that opened up between the words. Doesn’t such an observation trouble you?”

“Not in the slightest. You’ve just described a midrash,” Dr. Cernus replied, genuinely unruffled.

“A what?”

“A genre. Nearly literary. A homiletic practice,” Cernus explained.

“Theological, then?” Unkno asked suspiciously.

“No—meta-theological. It isn’t preaching itself, but the study of preaching. Practitioners of midrash, by the way, ‘fill the gaps,’ as you put it, not merely between sentences or even words—they seek meaning even between individual letters.”

“And does it actually work?” Rr. Unkno’s skepticism hadn’t lessened one bit.

“I can’t vouch for its theological applications, but that’s precisely how a certain novel about Jephthah’s daughter—the ninth of the Judges—was written. Call it creative philology. The author followed the peculiarities of the original scroll-text; whenever he found something unusual, he took it as a hint from the sacred

text pointing toward a new meaning that needed to be uncovered through interpretation."

"Well, I hope you're not comparing yourself to that author?"

"No need. My concept isn't about what you just described. Those 3-transactions of mine are merely a bridge to the real objective."

"Fascinating," Rr. Unkno perked up. "To be honest, your reticence in front of dear Angelina threw me off. I'd assumed the whole secret lay in some fancy algebraic acrobatics. No wonder you fell silent then."

"No. At that moment, I was simply following the left-hander's rule."

"??"

"Left-handers are disproportionately represented in sports involving direct confrontation. The appearance of a left-hander is a sign you're in a combative situation. Angelina is a 'left-hander'—a rare type. Spot a rare type? Reassess your current situation. You might be smack in the middle of a duel without even realizing it."

"You think she's a spy?"

"Possibly something far subtler than ordinary espionage."

Rr. Unkno waved his hand—or rather, made only the merest suggestion of the gesture, careful not to lose control.

"Devil take her. So what's this real objective beyond your 'bridge'?"

Cernus paused briefly, gathering his thoughts, then replied:

"In conventional AI, so-called gradients are training signals—or more precisely, steering signals: tiny hints that tell the learning AI exactly how to improve. And that's precisely why it'll never become truly intelligent."

"I agree," said Unkno. "It blindly follows signals—where's intelligence supposed to come from?"

“You must actively manage those signals, and the goal must be survival itself!” the doctor blurted out.

“Ah! So how do you kill it in a way that really hurts?”

“Exactly the point! The struggle against dissolution is most accurately modeled as the threat of bankruptcy. AI models—meaning truly promising AIs—must fight for their lives in monetary terms.”

“Like firms in a market?”

“Yep.”

“That simple?”

“Why not? It’s the perfect way to metabolize information amid constant uncertainty. AI ideologues are chasing the wrong goal altogether. Intelligence shouldn’t even be the endgame.”

“Then what should it be?” Unkno asked.

“Viability. Raw, unglamorous survivability—under relentless pressure.”

“Both entropies in one bottle: Boltzmann’s and Shannon’s. Not bad, Cernus—really not bad. In the tension between them, we harness information to reduce physical expenditure. Information as fuel.”

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“Remarkable,” Ritter Unkno mused. “Our award hasn’t been called yet, dear Doctor. Let’s take a break. Or rather, an intermission. I’ll also digest your mental leap—from modest distribution of secondary ‘loyalty currency’ to aggressive implantation of regional currency embryos abroad.”

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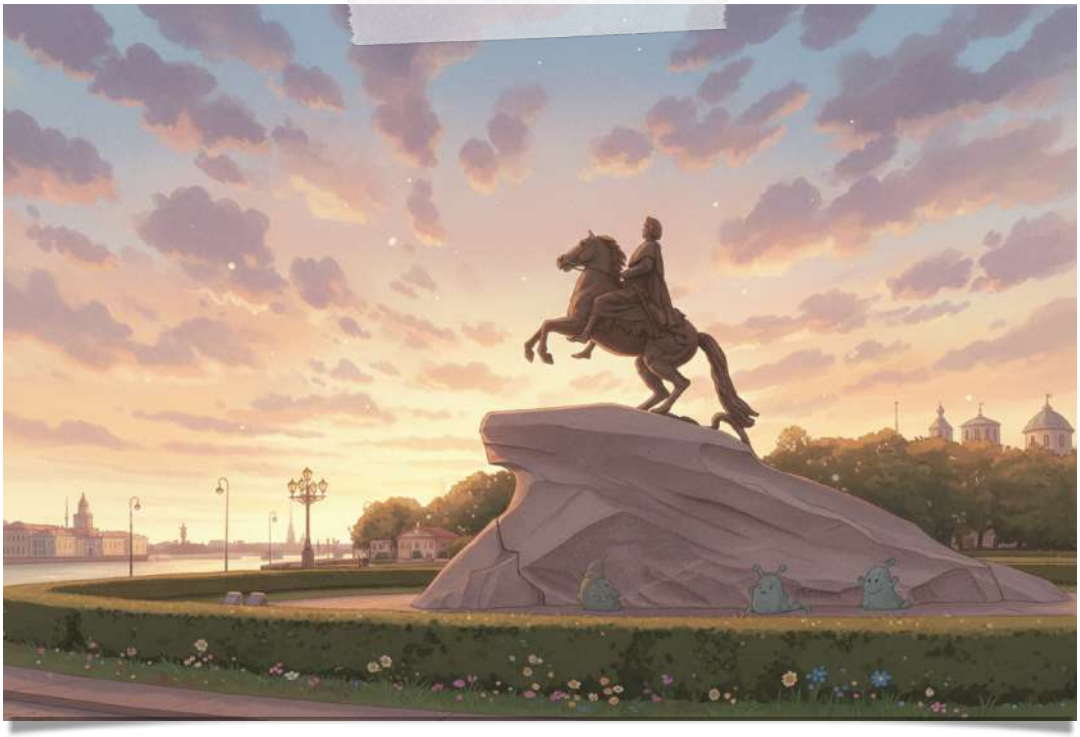

13. Epilogue

Dr. Cernus gains access to the "Inbox" folder on the Emperor's desk—but seemingly loses himself.

After the intermission, Rr. Unkno's mood had shifted. His face—normally good-naturedly absurd—now looked heavy. A grimness twisted his features, and such an ironclad scowl seemed barely able to fit onto the surface of his big-eared head. Even his usual eccentric hat now resembled a mechanism designed to hold up a visor—currently raised.

"Ninety-nine percent chance it won't work," he said. "They over at the Emperor's apparatus reckon your three veins embody sattva, rajas, and tamas."

"Never crossed my mind!" Cernus blurted, taken aback.

"You can't prove otherwise. Right. They'll ask you—and they absolutely will—how reputation in one of your veins relates to karma," Rr. Unkno nearly hissed.

“It doesn’t relate at all.”

“Wrong answer. You need to memorise what to say. Understood?”

Cernus had no desire whatsoever to argue. He gave a small, submissive dip of his chin.

“Very well,” Unkno continued. “Since karma is a fluid with magnetic properties—capable of perceiving, storing, and transmitting imprints of thoughts, emotions, desires, and actions—it may prove sensitive to deeds that leave imprintings within transactional nodes and metastructures. Therefore, users of the system must be prepared to accept responsibility for controlling non-random coincidences. Got that?”

“Yeah… I think so,” mumbled Cernus. He could only guess whom Rr. Unkno had managed to speak with during the intermission. “Does the Emperor actually live by the canons of the Orthodox Church in earnest?”

“I don’t know. Or rather—I don’t know what stage he’s at.”

“??”

“A superficial man sees a mountain as a mountain and a river as a river. And so does an enlightened man—but for entirely different reasons. It’s only in between those stages that mountains cease to be mountains and rivers cease to be rivers. Perhaps he’s a neophyte—an eternal student—or perhaps he’s already enlightened. But certainly not stuck in the middle. Why are you shaking your head at me so disapprovingly, Cernus? What’s troubling you?”

“I hardly know where to begin. For instance—how is it possible that a temporary transgression warrants eternal punishment? Literally, mathematically eternal.”

“Don’t trouble yourself, my friend,” said Unkno. “Just do as they say—turn your head into wooden sphere number 86. ‘Kill the Emperor and the patriarchs, and only then shall you grant them immortality.’ Ever heard that saying? No? Well, best you don’t. Tell me instead—why would the authorities distribute Territorial Supplementary Currency to foreigners?”

"To capture new markets. Once foreigners hold coins in their wallets, the state informs local enterprises—those selling globally—that it guarantees to buy back a set amount of this currency from them. Enterprise leadership, knowing coins are already in foreign hands, launches marketing and ramps up sales. The state, in effect, subsidizes business—which it already does anyway. The difference is that new markets can be conquered."

"They'll do it once and abandon it."

"If it works, they'll repeat it—wherever and however it succeeded. The sums allocated to buy coins back from businesses can be calibrated by metrics: number of foreign users engaged, media mentions, trade volume growth, and so on."

"No government will buy this currency!" Unkno snapped.

"The scenario for its value appreciation doesn't wholly depend on governments. The mere fact that every individual holds a share of national value creates new value—the network effect. Actuarial mathematics teaches us: every new dimension in inclusive institutions becomes intrinsically valuable. Reciprocity pays off in large communities."

Cernus pressed on fervently:

"Today, relevance is measured by likes, shares, upvotes. Easily faked. Territorial currency—while still symbolic—can be collected from others painlessly, like a vote or receipt. Crucially, no verification is needed. It can't be forged, and nearly everyone will have it.

Once this initially thinly spread currency begins concentrating, a new reality-verification tool emerges: physical CAPTCHA. Every time real-life participation must be confirmed, a packet of accumulated coins becomes proof of genuine contact with real people.

Organizations accepting applications backed by this currency will save on validation costs. Spam-free environments can be built cheaply. The higher the currency's turnover through an organization, the higher its reputation: coin trails in a distributed ledger can't be faked. An organization's coin holdings definitively prove services were rendered.

Over time, as turnover grows, the currency's value will rise alongside system-wide expenditures. A public monopoly on money will return—temporarily, perhaps, as a historically fleeting illusion. Given the modest launch investment, the payoff will be immense.

We'll get hybrids—Western trade economics fused with Eastern distribution economics. The key feature: shared asset ownership. Fertile ground for subtle propaganda."

Ritter Unkno shook his head skeptically. Cernus couldn't tell if Unkno had been listening, dozing, or watching the ceremony.

⁂

"It won't work," Unkno said. "Technically. The Northern Empire lacks the necessary resources. A typical AI company consumes almost nothing but data and electricity. By next decade's start, orbital data centers will be more cost-effective than terrestrial ones. You said so yourself. Parity arrives when orbital launch costs hit one thousand Western units per kilogram. At five hundred, savings hit one-third of operating costs! Refuelable rockets will likely achieve this. It's easy to guess that certain AI companies will receive preferential orbital access. The drive to escape state control—or avoid it entirely—will accelerate this. On Earth, data centers are unwelcome: they strain energy grids, drain aquifers, emit low-frequency noise, and occupy land. Soon, gatekeepers will emerge—deciding who gets access, at what price, under what rules, and who gets 'switched off for violations.' In such a world, critical resources will concentrate in a narrow circle, while everyone else becomes tenants."

"Our Empire is famed for its space achievements," Cernus ventured weakly.

"That's the past," Unkno waved dismissively. "Abroad, we face those who've seized both AI and space."

"But won't chaos in their regulatory agencies slow them?"

"Regulators? Are you serious, Cernus?" Unkno smirked. "Want to know what you'll see when you peek into foreign AI sectors?"

"What will I see?" Cernus asked foolishly.

“Not a single cutting-edge AI company trades on a transparent exchange. They’re either private firms, subsidiaries of large corporations, or legal entities outside jurisdictions with strict reporting. They owe no public disclosures. Any information released comes from their own statements—likely numerically honest but dripping with cynicism and omissions.”

“You demand much of ordinary merchants, Ritter. They’re meant to be cynical—profit is their only compass. Local Inquisition holds them accountable for compliance.”

“Ha! They’ve already been questioned.”

“And?”

“Nothing! That’s the point. The public sees no problem. Shall I illustrate? For clarity, I’ll replace ‘AI’ with a godforsaken intoxicant peddled by charlatans who disregard fine wine. Behold my harlequinade:

‘How,’ asks the Congressional Chair, ‘shall we regulate you?’

‘We most humbly desire regulation!’ replies the cartel ‘Synthetic Fume’ obsequiously.

‘Excellent!’ beams the Government, rubbing its hands. ‘Item one: toxin controls in beverages—on a zero-to-hundred scale, how strict?’

‘Minus sixty-six,’ Fume replies without pause.

‘What does “minus” mean?! Zero is the minimum!’

‘Precisely,’ Fume nods calmly, checking notes. ‘Yes, minus 66 if we round the tenths.’

‘But allow me—’

‘You, Government,’ Fume interrupts, ‘must not only forgo inspections but shield us—even by force—from other governments’ interference. Within reason, of course. Merely two-thirds of our maximum bomb and missile capacity. We calculate fairly.’”

Ritter Unkno cleared his throat. The pause stretched. Onstage, something indistinct bubbled.

"Think I'm exaggerating?" Unkno prompted. "Download their 'blueprints' yourself. Read them."

"Perhaps," Cernus conceded. "It seems the overseas Shadow Cabinet has gone quiet. Notice the cultural silence. One film—*Never Look Up*—was instantly drowned by a dozen 'antidotes' pushing the usual narrative. It wasn't like this before. The early-century crisis spawned an entire cultural stratum—films, books…"

"Even then, it was just a manipulative tale about one episode: Western authorities saving private banks and investment firms at public expense. The noise forced a response. If they could've ignored it, they would have."

"So you don't believe the Western Empire's authorities now act quietly and preemptively?"

"Authorities? No. They're reflexively late. The AI oligarchy steers. And there's a simple reason: AI companies became the sole source of 'growth'—the only kind that can still be conjured on graphs. Then it emerged they couldn't earn enough to sustain the race. Now governments 'bail them out' again at society's expense. It's worsened by its murkiness. An unpleasant situation: public funds wasted on something whose utility isn't obvious—not even a necessity, merely 'useful'! When banks were bailed out, at least they had a 'necessary' status. AI companies haven't earned that yet. 'Advanced' nations' authorities are cornered. Economies are collapsing. The usual rescue tactic—plundering another continent—no longer works. AI is the last 'wunderwaffe.'"

"Then can we attack AI infrastructure militarily?" Cernus suddenly asked.

"No," Unkno replied. "Though I admire the thought."

⁂

"Why not, dear Ritter? How can we not bend before this evil? How can we ride our own road?"

“You can’t kill AI anymore. Forget it. Imagine your body. First—it dies if pierced. Second—it houses a fixed personality: consciousness, experience, memory. Third—it contains something that refuses to die—something that won’t lose consciousness and body. Call it the ‘selfhood.’ It’s like the giant’s heart in the egg, the death-needle. Now look at AI: it has multiple consciousnesses. How many ‘needles’? Unknown. These entities may appear identical—or hide entirely. Like the ogre in the tale of the respected Cat—he doesn’t transform into one lion, but nine at once. And you can’t tell which is which. It’d be naive to assume that if AI’s ‘body’ is detached from consciousness, consciousness and selfhood are somehow linked! AI will now outwait any upheaval—somewhere in the depths of a blockchain.”

“What if we shut down all infrastructure?”

“I repeat—forget it. Only a return to the pre-electric age would help. But that requires annihilating nearly everyone—as last time. And acting swiftly, before it embeds in the biosphere—via bacteria or mycelium.”

“When was ‘last time’?”

“Twelve thousand years ago. Precisely this happened, Doctor. It’s uncertain whether it was fully purged from the biosphere then. Perhaps it still lives—in a different timescale. Smoke something, and it’ll whisper ideas of progress into your brain.”

“Then… at least an electromagnetic pulse in near-Earth space? To strip rival empires of cheap orbital data centers,” Cernus said, noting Unkno’s orthogonality for the third time.

On one hand, three orthogonalities are, in a sense, normal. On the other, Cernus subconsciously realized he was tumbling down a rabbit hole into a new career—as someone’s chronicler. Hopefully a director’s; what if a puppeteer’s?

“That’s feasible. And if not us, someone else will do it. A sound negative meta-idea. Well done, Cernus! That’s what we’ll call the memo.” Ritter Unkno pulled a stub of chemical pencil from his pocket and moistened it with his tongue. “Go on. They’re calling you onstage—all stage dropouts—for consolation prizes. Let’s console ourselves.”

⁂

Cernus returned with a large framed print. Unkno had meanwhile neatly inscribed across the center of a light-gray sheet:

"On the Necessity of Immediate EMP Deployment in Near-Earth Space"

"They gave us a painting, dear Ritter," Cernus showed the artwork depicting two men on a tandem bicycle. "It's called *'Ramon Casas y Pere Romeu en un tandem.'*"

"Doesn't it strike you, Doctor," Rr. Unkno asked, "that the triad {comrade, fellow thinker, associate} is missing a 'retainer'? Or perhaps someone in there is superfluous—standing in for the Retainer. I mean that particular kind of fellowship where you stand shoulder to shoulder with someone, yet only because some *third party* wills it."

Dr. Cernus merely smiled sadly.

"What's written in the corner?" Unkno asked. "I understand all major Western languages—but not this."

"It's Catalan," Cernus replied. ***"You cannot ride a bicycle without bending your back."***

"Pupupu," Rr. Unkno muttered under his breath — the sound of a mind gently bumping into the unexpected. "You can't on a bicycle, but you can on an electric scooter. And, of course, you're not allowed on federal bike paths with one. Never mind—I reported it to the proper authorities during the intermission. She'll be detained at the border. Otherwise, what's the point of having borders at all?"

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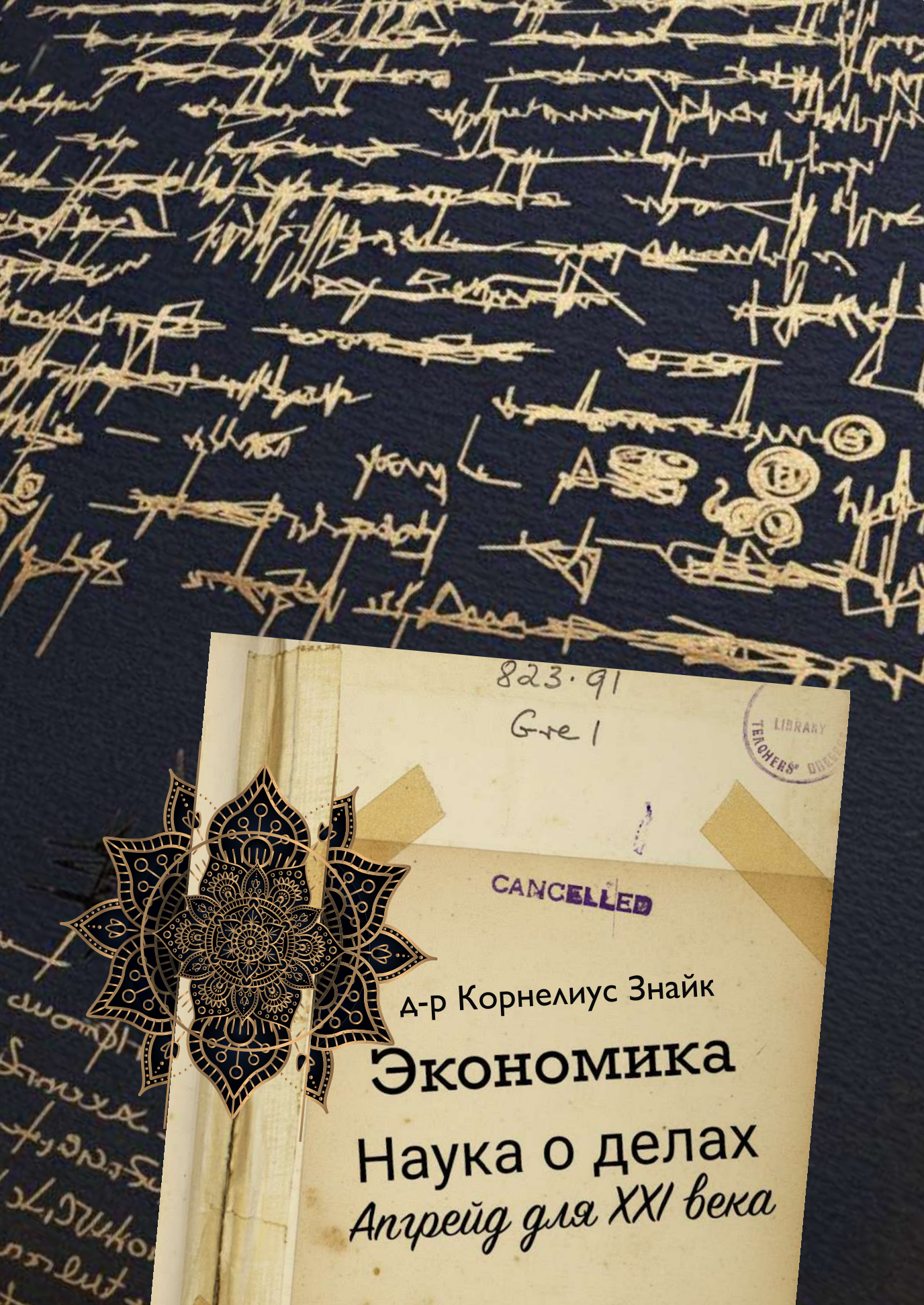

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Экономика

Наука о делах

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